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HARVARD BUSINESS REPORTS

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(Arranged Alphabetically According to First Initials)

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¹ Unless otherwise stated, titles are those in the Graduate School of Business Administration, George F. Baker Foundation, Harvard University, at the date of the commentary.

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J. G. C.	JOHN GURNEY CALLAN <i>Professor of Industrial Management</i>	149, 153, 159
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W. J. C.	WILLIAM JAMES CUNNINGHAM <i>James J. Hill Professor of Transportation</i>	111, 119, 126, 130, 134, 272

¹ Faculty of Arts and Sciences, Harvard University.

HARVARD BUSINESS REPORTS

VOLUME 7

HARVARD BUSINESS REPORTS

WELDON FINANCIAL SERVICE¹

PERSONAL INVESTMENT—*Diversification of Investment.* The general manager of a financial service was requested by a customer to make recommendations on his list of investments. The general manager advised a greater diversification in investment, suggesting specifically that the customer replace part of his stock in a shoe machinery company by some railroad and automobile stock, sell half his stock in a cotton manufacturing company and purchase public utility stock in its place, and exchange the stock of a woolen company for that of a company manufacturing cast iron pipe.

(1924)

On October 10, 1924, the general manager of the Weldon Financial Service received a request from a recent subscriber to the firm's weekly financial forecast for recommendation as to his list of investments. The customer, Mr. Paxton, submitted the request on the standard form supplied by the Weldon Financial Service. His investments were as shown in Exhibit 1.

EXHIBIT 1

INVESTMENTS OF MR. PAXTON, OCTOBER 10, 1924

Shares	Stock	Price Paid	Current Price
700	United Shoe Machinery Common.....	36	39
60	Amoskeag Mfg. Company Common.....	105	71
50	Lancaster Mills Common.....	143	100*
25	Union Oil of California Common.....	132	132
50	American Woolen Preferred.....	102	96
50	Great Western Sugar Common.....	90	85

* Price asked.

In his experience, the general manager had found that a new customer might resent detailed questions and become suspicious of the purposes of the firm. Therefore the Weldon Financial Service followed the practice of requesting only a minimum of information regarding a new customer and of trying to obtain further information by correspondence as the customer's con-

¹ Fictitious name.

fidence in the firm increased. Mr. Paxton's answers to the questions asked of him were as follows:

1. Are you dependent on your income from investments? No
2. Are you investing primarily for income yield? Part of holdings
3. Are you willing to assume a business man's risk? Yes
4. Are you willing to place part of your funds in securities which, while they pay no dividends at present, offer great possibilities for price appreciation? Yes

The Weldon Financial Service was operated by a general manager, three assistants, and six clerks. It had been in existence for about a year. Customers were sent weekly stock market summaries, weekly speculative guides, biweekly investment bulletins, and biweekly business forecasts. On request, customers were given personal advice on their investment problems and reports on particular securities. As a rule, requests for personal service were received from from 1% to 1½% of the customers each day. The yearly fee for the entire service was \$75.

The general practice of the firm was to recommend for investment only stocks and bonds of the highest grade. No advice was issued from the firm without the personal approval of the general manager. Upon the receipt of a request for advice on a security he had one of his assistants obtain for him all the available facts concerning that investment; or, in the case of a security with which he was particularly familiar, he replied without further research. He based his recommendation on a thorough analysis of the intrinsic value of a given security in relation to its price. He gave particular weight to the record of a company over a period of years; when they were available, he considered carefully the records for several years before the World War.

In October, 1924, the general manager believed that the trend of the security market was upward. The price of industrial stocks had declined from January until May but had risen substantially by August; in September it had fallen slightly. Interest rates on four to six months' commercial paper had decreased steadily from January until September. General business conditions were favorable to an advance in business activity. The production of pig iron had declined from March until August but had advanced substantially in September. Bradstreet's price index also had declined from January until July but had advanced both in August and September.

After examining Mr. Paxton's investment list the general manager wrote to him as follows:

October 10, 1924.

DEAR MR. PAXTON:

There are three changes which I would suggest in the list of securities submitted.

First, I would recommend selling half of your holdings of United Shoe and purchasing with the fund some Atchison and White Motors. Second, I would recommend that you sell half your Amoskeag and in its place purchase Consolidated Gas of New York. Third, I am in favor of exchanging your American Woolen preferred for U. S. Cast Iron Pipe preferred.

You have too large a proportion of your funds in United Shoe. While this company is very sound and ably managed and over a period of years the stock will probably be worth more intrinsically, it is just a question whether you could not do better than to have such a large percentage in this one stock. United Shoe always sold high in relation to its earning power. For instance, in the 8 years ending March 1, 1924, the average net profit for the common stock has been equal to only about \$3.37 a share. On the new basis of leases, the company may make a better showing, but it seems to me that for a stock earning around \$4 a share and paying \$2.50 the stock is relatively high at around 39. While United Shoe, on account of the stability of its business, may deserve a rating as an investment, it seems to me that if I wanted to invest money I would invest it where it would be safer and yield as much, if not more, than United Shoe and, if I wanted to speculate, I would choose something which would involve no greater risk and which would have a better chance of appreciation in price. For that reason, I suggest lightening up on United Shoe and purchasing a stock like Atchison, which is as good an investment stock as United Shoe, yields 5.6%, and offers better speculative possibilities.

Atchison has been earning large amounts for years and turning back everything into the property except \$6 a year per share. Last year it earned \$15.43 a share on its common stock. This year it is expected to earn over \$10 a share. During the last 10 years the company on the average has earned its dividend requirements about twice over. The policy of putting back large amounts into the property has strengthened the position of the road and it seems to be only a question of time before stockholders will receive a larger return than the present \$6 rate.

The unsettled and abnormal conditions in the cotton industry have made it impossible for Amoskeag to show any profits. For the year ended June 2, 1923, the company reported a deficit of over \$2,000,000 after payment of dividends while in the previous year it lost \$1,875,513. For the year ended May 31, 1924, it reported a deficit of \$4,337, 931 after payment of dividends. With

anything like normal conditions in the cotton industry, Amoskeag should be able to report favorable earnings on its common stock, but there is no assurance that conditions will improve immediately, and for that reason I suggest disposing of part of your holdings.

In Consolidated Gas you would have a stock selling around the same price, paying a larger dividend, and earning it by a substantial margin, and one which has more definite reason for advancing than Amoskeag. This company is one of the largest public utility concerns in the world. It operates in a territory which is continually expanding. The \$5 dividend has always been earned by a comfortable margin. Last year Consolidated Gas earned \$7.77 a share on its common stock and in the previous year, \$6.14 a share. At its present price, the income yield is about 7%. The falling rates for money and the excellent record of this company indicate that the stock is entitled to sell several points higher. In holding a stock like Consolidated Gas you are not assuming very much risk and at the same time you have a security which offers good chances for price appreciation. Consolidated Gas is attractive both from the investment and speculative standpoint.

While U. S. Cast Iron Pipe preferred is not so seasoned an issue as American Woolen preferred, I nevertheless feel that its dividend is as secure, and there is the possibility of its advancing a few points, as there is a back dividend of around \$5 a share which will be paid according to a recent decision. Last year, Cast Iron Pipe earned \$28.93 a share on its preferred stock, or over four times preferred dividend requirements.

Lancaster Mills, Union Oil of California, and Great Western Sugar are all good common stocks and should be held.

Yours truly,

J. F. JACKSON
General Manager

COMMENTARY: The recommendation that Mr. Paxton's investments be diversified further is undoubtedly sound, but the methods by which it was proposed to obtain this diversification are open to serious criticism. It is much sounder, for example, to divide the investment risk among seven good stocks than to hold ten stocks three of which are in industries that do not show real possibilities of growth.

Diversification of securities to prevent loss is merely a negative objective. While this goal is praiseworthy in itself and is necessary, especially in the case of estates invested wholly in bonds, a fund in common stocks should be diversified not only to prevent loss but to obtain a reasonable appreciation. To provide successfully for such diversification requires a knowledge of the underlying economic conditions in the industry so that investments may be made in companies or groups of companies that have the greatest natural opportunity for growth and hence for appreciation in the value of their securities.

A superficial examination of the reported earnings of a company often fails to disclose the important economic factors that must be known if the selection of securities is to be wisely made.

It is obvious that a service of this nature for which the entire fee for the year was only \$75 could not be expected to give individual lists the careful attention that they really require. Probably the most that could be expected was the recommendation of a few carefully selected stocks in the investment and speculative bulletins. This type of recommendation, of course, is for the general use of customers, so that the stocks usually cannot be selected to fit the specific need of any one client. It also should be recognized that a service of this nature is practically forced to recommend some purchase in each of its bulletins. Even though the manager of the service might be convinced that no purchases should be made for a considerable period, he could scarcely expect his clients to pay \$75 for this advice. Most general services, therefore, must be interpreted by the individual in the light of his own requirements.

A comparison of the prices of the securities recommended to be held or purchased with prices of the same securities several years later would not be of especial significance in determining the value of the service. It is to be expected that any investment counsel which finds it has made an unwise recommendation will rectify this error by making a new recommendation without waiting several years to establish this fact. The real question is whether the recommendations were the best that could be given at the time they were made.

Even though the firm admitted that conditions in the cotton industry were poor, it made only a half-hearted recommendation that a part of the holdings of Amoskeag Manufacturing Company common stock should be sold. This compromising attitude in regard to holdings in the textile industry, the wide difference in the quality of the various stocks to be held, and the large amount of holdings in United Shoe Machinery Corporation, The Atchison, Topeka and Santa Fe Railroad Company, and White Motor Company common stocks compared with a relatively small amount of Consolidated Gas Company of New York common stock would indicate that the recommendations in this instance were not based on as careful an analysis of the industries or on as well organized a plan for the individual investor as was to be expected.

August, 1929

C. E. F.

WELDON FINANCIAL SERVICE¹

PERSONAL INVESTMENT—*Speculation in Stocks*. The general manager of a financial service was asked to make recommendations on a customer's holdings of stock, all of which were held on a margin of at least 50%. The general manager, expecting that the trend of the stock market would be upward and that business conditions would improve, recommended the replacement of the securities of companies which were in such an unfavorable financial condition that their stocks probably would move contrary to the general trend of the market. Some of the stocks of doubtful value and uncertain promise, however, he recommended retaining during the prevailing period of speculative enthusiasm. (1924)

On August 6, 1924, the general manager of the Weldon Financial Service received the following letter from the president of a retail lumber company:

DEAR SIR:

For the past three years I have been a subscriber to another financial service. I have invested in various securities, all of which I have held on a margin of at least 50%. I have followed carefully the advice of this service as to when to buy and when to sell, but the results have been unsatisfactory. My experience, therefore, has made me somewhat skeptical of investment services. I have seen your service advertised, however, and desire to subscribe for a trial period.

Approximately one-half my available funds have been invested in high-grade bonds which were purchased mostly in 1921. They are now yielding a satisfactory interest, and I would be better off had I placed my entire funds in the same securities. These bonds are held outright. I enclose a list of the remainder of my securities [Exhibit 1], most of which were purchased in 1921 and 1922, although I have made a few changes since that time.

Will you kindly advise me as to any changes that you think I ought to make in this list?

Very truly yours,
H. R. PINKERTON

In August, 1924, the general manager of the Weldon Financial Service expected that the trend of the stock market would be upward and that business conditions would improve. The trend

¹ Fictitious name.

of the market had been downward from January until May, but had turned upward slightly in June and more substantially in July. Interest rates had been declining each month during the year, and in August money conditions were easier than they had been at any time in several years. General business had been dull during the first part of the year. Pig iron production, after an increase in March, had declined substantially, and unfilled orders of the United States Steel Corporation had been declining

EXHIBIT I

LIST OF H. R. PINKERTON'S INVESTMENTS, AUGUST 6, 1924

Shares	Stock	Price Paid	Current Price
200	Missouri, Kansas & Texas Common	14	15
100	Southern Railway Common	67	64
50	Baltimore & Ohio Common	49	63
100	Chicago, Milwaukee & St. Paul Common	14	16
100	Chicago, Milwaukee & St. Paul Preferred	41	25
50	Great Northern Preferred	79	65
100	Chicago, Great Western Preferred	15½	17
30	Union Pacific Common	119	141
20	Atchison Ry. Common	82	105
100	Brooklyn Manhattan Common	15	27
200	Willys Overland Common	11	8
100	Moon Motors Common	26½	22
30	Chandler Common	76	49
100	General Motors Common	13	15
50	Durant of Indiana Common	16	18
50	Lee Tire Common	28	11
200	Kelly Springfield Common	32½	15
50	Goodrich Common	38	23
50	Pure Oil Common	32	24
100	Sinclair Oil Common	34	17
500	Transcontinental Oil Common	6¾	5
100	California Petroleum Common	23½	23
550	Middle States Oil Common	8¾	1½
50	Anaconda Copper Common	55	36
20	Inspiration Consolidated Copper Common	36	26
200	Ray Copper Common	10½	13
200	Seneca Copper Common	9¾	2
50	Republic Steel Common	58½	48
50	Miami Copper Common	26	24
100	Cerro de Pasco Copper Corporation Common	45	45
50	Nevada Copper Common	12	14
50	American Smelting Common	42	70
100	Tenn. Copper & Chemical Common	11¼	9
200	Cuban American Sugar Common	34¾	31
200	Cuba Cane Common	15¼	14
50	American International Corporation Common	26½	26
100	Central Leather Common	25	14
100	Radio Corporation of America Common	5⅛	5

steadily. Bradstreet's price index, however, had increased slightly in the latter part of July and the first part of August for the first time since the end of 1923. The general manager expected that the advance in security prices would be followed by an improvement in general business conditions.

He examined Mr. Pinkerton's list, therefore, with a view to recommending the sale of securities of companies which were in such an unfavorable financial condition that their stocks might move contrary to the general trend of the market, and to recommending the purchase of securities of companies which were in a sound financial condition. He then wrote as follows to Mr. Pinkerton:

August 16, 1924.

DEAR MR. PINKERTON:

I have examined your list submitted recently with your membership in this Service. I can hardly blame you for your skepticism in regard to financial services. I hope that your experience with us during the term of your enrollment will be such as to justify confidence in us. Our method of making money in the market differs considerably from that of the other services. They apparently believe that "when to buy" is the primary consideration and that, if we are in a cycle of rising prices and enough different stocks are purchased, profits will be made.

Our theory is that "what to buy" is the fundamental consideration. Only after careful study and analysis do we recommend the purchase of a stock. We hesitate to advise the purchase of securities which may go up because of rumors, but which we know are not entitled to advance. We feel that more money can be made by purchasing good, sound securities which study shows are intrinsically cheap and which we know have some justification for selling higher.

It was by adopting this method that we were able to put our members into such stocks as U. S. Cast Iron Pipe at 27, Southern Railway at 30, the Erie issues at 11, 17, and 15 respectively, Consolidated Gas at 57, Hudson & Manhattan at 11, Hudson Companies preferred at 14, and a host of others too numerous to mention. Of course, we are not infallible, and occasionally a stock does not act as we believe it will, but in a general way our method has been successful and we hope to be able to convince you to that effect.

You now hold a number of highly speculative stocks, some with promising possibilities and others with doubtful possibilities. The ones in the latter category include Lee Tire, Kelly Springfield, American International, Central Leather, St. Paul common and preferred, Goodrich, Great Northern, Chandler, Chicago Great

Western preferred, Seneca, and Middle States Oil. These stocks represent companies which were badly hurt in the business depression following the termination of the war and which have not yet shown any real ability to come back.

Out of this list, perhaps the rubber stocks are the most promising. For the last four years most rubber companies have been compelled to take some very substantial losses. At various times during that period it seemed as though the industry had turned the corner, but that proved only temporary. In the first six months of 1923, for instance, Kelly Springfield and other rubber companies reported good earnings, and it appeared that a good balance would be earned for the year. Yet, in the last six months, earnings fell off substantially and not only were earlier profits wiped out but deficits were reported for the year's operation. We are now in a stage when the industry is again beginning to show improvement, but whether that will be permanent or not it is too early to forecast. I would advise continuing to hold these rubber stocks and awaiting future development in the industry.

I would not recommend holding Central Leather. This company, as you know, made a lot of money during the war but has lost all that and more since, and I can see no reason for judging it by any but prewar standards. Before the war, Central Leather appeared high around 20. If you sold it and purchased in its place some Sinclair Oil to average your present holdings, I feel that this would be making a good move.

In order to recover the losses you have in some stocks it will be necessary to speculate, and in holding a speculative issue it is best to have one with possibilities such as Sinclair. As for Central Leather, I cannot become at all enthusiastic about its possibilities.

I would advise selling St. Paul common and preferred and in their places purchasing 100 shares of Missouri, Kansas & Texas preferred. The future of St. Paul is altogether too uncertain. While it may show some recovery from current levels, it is highly speculative. The showing of St. Paul has been below that of the average railroad, and it is problematical what the company will do next year with something like \$47,000,000 of bonds maturing. Last year, St. Paul showed earnings of around 18 cents a share on its preferred stock but in 1922 it lost over \$6,000,000 and in 1921 reported a deficit of over \$11,000,000. The showing last year was far below that of the average railroad. Missouri, Kansas & Texas, for instance, in 1923 earned \$10.89 a share, and promises to exceed that figure this year.

By this shift you would have, in my opinion, a sounder security, representing a road whose future is more certain than that of St. Paul.

Although we are not favorable to the northwestern rails, we would not advise disposing of them now. Conditions in the West are improving, and the rise in grain and wheat has stimulated

business in that section. We are watching the roads in that territory closely and, if at any time we feel that our members should relinquish their holdings in them, we shall advise them through the regular weekly bulletins.

I would recommend shifting from Chandler Motors into White Motors. The latter is selling only a few points higher than Chandler, yet its showing for the last year and one-half has been much more satisfactory. White Motors pays \$4, but last year earned \$13.80 a share on its common stock, almost three and one-half times dividend requirements. Chandler, on the other hand, just barely earned its \$6 dividend in 1923. For the first six months of this year, White Motors earned over \$6 a share while Chandler earned around \$4 a share. Chandler has long been selling relatively higher than other motor stocks on the basis of the earnings it has shown. Last year, White Motors earned almost twice as much as Chandler, yet there is only a spread of about 8 points between the prices of the stocks.

Chicago, Great Western preferred is, of course, a gamble, but in view of the low price you paid for it I would continue to hold it, particularly since I believe we are in a period of rising prices for railroad stocks, which will probably carry them all up.

With these few changes, your account would be straightened out for the time being. Before this bull cycle has run its course I think you should go through the list and clean out the dead wood. I would hesitate to go through that process now because, as I say, the speculative enthusiasm now prevailing will probably result in all stocks advancing more or less. There will come a time, however, when you should sell all the stocks of doubtful value and of uncertain promise and reinvest the funds in stocks of companies whose futures are assured and which we know are intrinsically cheap.

Yours truly,
J. P. JACKSON
General Manager

COMMENTARY: The statement that what to buy is a more fundamental consideration than when to buy is undoubtedly true. Securities of the leading companies that are excellently managed and that are in growing industries can be expected to show appreciation over a period of years; even though they decline somewhat in price after they are purchased, the growth of these companies eventually should compensate for this loss. Weak securities purchased during a period of rising prices often fail to show the appreciation evidenced by the outstanding companies of the country. When the stock of a weak company does show marked appreciation, the gain from this increase is obtained only at the expense of considerable risk.

Both successful investment and successful speculation require sound information, the principal difference being that in speculation more risk is assumed. The successful speculator frequently carries good investment stocks on margin rather than buying them outright or purchases securities of growing companies in new industries which have great promise for the future but which have not as yet become seasoned enough to warrant classifying their stocks as investments. The purchase of weak securities that may appreciate in value with the general market or the price of which may be increased by some pool action resembles gambling more than intelligent speculation.

Whether individual recommendations would have proved wise in the long run can readily be ascertained by a comparison of the prices of these stocks at the time they were suggested for purchase with subsequent values. Probably no service has ever been able to show a perfect record, but there is serious doubt that this service was following a sound general policy that would give it the largest possible number of successful recommendations. Advice to delay the sale of securities of doubtful value or uncertain promise is not sound. The risk of holding such securities is great. An analysis of those stocks which have shown a steady appreciation and which in the long run have increased the most in value shows that they are those of the leading companies in growing industries.

This service, therefore, should have recommended the immediate sale of the securities with a questionable future and should have advised the purchase of stocks of companies "whose futures are assured and which we know are intrinsically cheap."

August, 1929

C. E. F.

BADHAM *v.* WILLIAMS¹

PROFITS—*Determination of, under Partnership Agreement.* By a partnership agreement between two lawyers, it was agreed that from January 1, 1885, one partner should receive one-fourth of the profits for the next five years and after that one-third of the profits each year during the life of the partnership. Until the partnership was dissolved in 1899, no division of the profits had been made. At that time, the question arose whether the actual receipts of each year were to be considered in ascertaining the profits of the firm for that year, or whether money received subsequent to 1885 for work done previous to that year should not be included in the division of profits. In a summons brought by one partner, the court decided that all the receipts and expenses of each year, irrespective of the date of the work paid for, should be considered in ascertaining the profits of that year.²

(1902)

By a partnership agreement, dated the 22nd July 1880, made between Mr. G. Badham and Mr. E. W. Williams, solicitors, it was (*inter alia*) agreed as follows:

1. Mr. Williams is to receive £300 per annum up to the end of the year 1880, £350 per annum for the following two years. From the first January 1885 (in lieu thereof) Mr. Williams is to receive one-fourth of the profits (if the business shall have realized a net profit of not less than £1,600 per annum in the meantime) for the next five years, after that one-third of the profits.

This partnership was dissolved in August, 1899.

It appeared that no division of the profits had ever been made, and in taking the partnership accounts the question was raised whether the actual receipts and payments for each year were to be taken for the purpose of ascertaining the profits of the firm for that year, or whether moneys received subsequently to the year 1885 for work done previous to that year, when Mr. Williams first commenced to be entitled to a fixed share of the profits, should be considered as belonging to Mr. Badham and not as profits of the firm.

This was a summons taken out by Mr. Badham for the decision of the above question.

Renshaw, K. C. and *Stewart Smith* for Mr. Badham.—Mr. Williams was only a salaried partner before the year 1885. He ought not to be entitled to share in profits made in previous years in addition to having drawn his fixed salaries in those years.

Warrington, K. C. and *Ashworth James* for Mr. Williams.

¹ 86 Law Times Reports 191 (1902).

² Headnote by Graduate School of Business Administration.

KEKEWICH, J.—This is a short question to be shortly disposed of, but it is one of considerable importance. Mr. Renshaw has just now put it in the very strongest possible way. He says draw the line at the end of the year 1884, and start entirely afresh—that is to say, treat it as a new partnership commencing from the 1st January 1885, and then as to what would have been done by Mr. Badham in 1884 the profits arising from that must belong to Mr. Badham. That is so according to my view. That must be so; but the fallacy is that it is not a new partnership. The partnership commenced many years before then, and what we are dealing with is merely a rearrangement of the division of profits from the 1st January 1885, when Mr. Williams receives his one-fourth share of the profits. It could not be contended that he was then still a mere salaried partner. I daresay it would be put so by Mr. Badham whether any profits were earned or not; but even if that were the proper construction of the agreement, what he is to receive at the end of the year from Mr. Badham is a certain amount. It is a partnership commencing with the written agreement and continuing into 1885. If I could adopt the view which Mr. Renshaw has put before me on behalf of the plaintiff, that you should draw the line entirely at that date and start afresh, not only should I take a different view from what I now take, but I should take it from the very reasons which urge me to take the view which I am about to express. It is quite true that a solicitor's business differs from the business of any trading concern. It is a business which we need not describe, and which we all know stands quite alone. But for the division of profits a solicitor's business must be regarded just as any other business concern, and it must stand on the same lines (so it seems to me) as any ordinary trade or business. There are no doubt many ways of testing it. You may test it with regard to the returns made for income tax, or you may test it for the purpose of division of profits between partners, and you may test it in many ways. But one must not decide too hastily, and consider the returns of income tax, because those are governed by law independent of the partners, whereas the division of profits between themselves is a matter entirely of agreement between the partners, and if they please they can consider as profit made in any given year, profit which is not really attributable to that year. Take the hypothetical case of the first year of a partnership, which, of course, cannot, as a rule, be a profitable one in the sense that there is something coming in representing profit in that year. The system of credit which prevails in all businesses and trades prevents the possibility of a large porportion of profit being made in the first year of any concern. Supposing at the end of the first year the two partners, whether solicitors or traders, say: "We have had a very good year, we have not got much money at the bank, but it is coming in, and most of it will come in in the next three months—there is no reason why we should not divide as profits a considerable sum, and, in order to divide it as profits, why should not we draw upon our bankers?" There is nothing dishonest in that, and nothing contrary to ordinary commercial morality, and certainly noth-

ing contrary to ordinary commercial practice. A man might consider that he was fairly entitled to divide profits and put into his own pocket a sum formed upon an estimate of business done—the money coming from the business done in the year first closed. But would that be properly the profits of the year? It seems to me that in the absence of special agreement the profits of the year must necessarily be the receipts of that given year after the expenditure and whatever else in the way of depreciation fund and so on applicable to the particular case is set against it. In the absence of a special agreement, I do not see how any accounts could otherwise properly be taken on a real footing, and, in the absence of special agreement, I venture to say that no accountant would audit accounts so as to show a profit on that mere footing; you may provide by estimate for it, but of course that requires, to my thinking, a special agreement. If you have no provision for an estimate, then you must take the actual facts. What is true of a trading concern is true of businesses which are not business institutions. Take haphazard such an institution as the Zoological Society of London, which, of course, cannot earn profit. Would it be possible for them to make out an account for the year 1901 on the footing that many subscribers had failed to pay, and that therefore the moneys which they ought to have paid in 1901 should be treated as receipts for that year? The total assets which you might have made you may estimate, but you cannot treat as received for the purposes of ascertaining the balance due, moneys which ought to have been paid in 1901, but which have not been paid. Although in the example I have taken there could be no question of profits, yet the same principle applies to the accounts here in the absence of special agreement. There are several cases of recent date in which the question has arisen of what a company ought to divide as profits, and that is because there is a power which sometimes exists or generally exists to estimate the profits earned for the purposes of giving the shareholders immediately a proportion of that which according to a fair estimate would otherwise come into the accounts of the next year. There have been many learned discussions lately, and I suppose there are likely to be more, as to what may fairly be brought into account in that way for the purpose of division of profits, but, in the absence of anything of that kind, if it is a mere question what were the profits made in a particular year, it seems to me that the duty is to ascertain what cash has been received and what cash has been expended, and, if that is fairly done, you know the profits of the year. If there is a large outstanding liability which cannot be settled, the partners will estimate that, and it will not be considered as part of the profits. If there is a large outstanding possible loss, and there is a large sum due to a client, then you would provide for that. But in ascertaining what is really actually divisible for the year fairly, you take the cash account as it stands, and really that is the principle, of course, of income tax returns. The income tax return is a return of the actual receipts less such expenditure as is properly chargeable against those receipts. Putting it in a concrete sense, you may ask a man whether

he has had a good year. He says: "Yes, I have had an excellent year, but unfortunately those with whom I have been dealing have not paid up, and consequently I find a little difficulty in meeting my Christmas bills." But that does not prevent your having a good year in the sense of having done a large amount of business. But of course it makes a great deal of difference if you consider it with a view to the money he has available, and if he is asked what he has to divide he would be bound to say: "I have very little to divide. I have very little where-with to pay, but next year I have every reason to hope from the business done that it will be better." Now, taking another example. A merchant in London consigns a cargo to some foreign port for sale in 1901. Suppose the payment is made by bills perhaps at six or three months, it may run into 1902. Now, are they to treat that as concluded in 1901, and consider that business as attributable entirely to 1901 when the bills may not be met at maturity? Are they to consider those as so much cash for the purposes of that business? It seems to me that that would be entirely wrong in the absence of a special agreement. For the purposes of the balance sheet, no doubt, they would estimate that there is an outstanding asset which they hope to realize; but for the purpose of ascertaining the profit and loss—that is to say, what is to be divided—it seems to me that they must consider only what they have received, because those bills will only come in when met at maturity in 1902. I am bound to consider this simply apart from any special agreement, because here all I have is that Mr. Williams is to receive a fourth part of the profits and nothing more. Is there any special agreement about that in the plaintiff's favour? There is certainly none. I do not think myself there is anything on the evidence to show that a special agreement establishing the practice would help the defendant. There is certainly nothing to help the plaintiff. That fact being so, I must decide the question quite apart from any practice which prevails, supposing practice could affect it. It seems to me on that, that although I quite see that it introduces difficulties, and that a line has to be drawn for certain purposes, and that the result of drawing that line in the way I do gives Mr. Williams a share of the profits in the business really transacted by Mr. Badham alone, he being the only responsible partner in the firm, nevertheless, treating it as a partnership which commenced as it did from the date of the written agreement, I think the general principle must apply. I shall give directions to the master that in taking the accounts he must consider the sums received and the sums expended in each year only for the purpose of ascertaining the profits of that year.

COMMENTARY: It should be noted that this is an English case, decided in 1902, upon the principle that there is no contractual relation between lawyer and client. Since this relation is contractual in the United States,³ this discussion will be based upon the present American practice.

³ 6 C. J. 718.

The decision in this case is contrary to that which would be reached by American accountants today. It also is seen by the judge to introduce difficulties, for he remarks that it "gives Mr. Williams a share of the profits in the business really transacted by Mr. Badham alone, he being the only responsible partner in the firm."

As to the business done prior to 1885, when Mr. Williams first began to share in the profits, it must be assumed for purposes of this discussion that every case handled and completed resulted in a binding obligation for the client to pay the fee, provided it was reasonable, since this is the American practice. Such claims of the law firm against its clients were just as much a property or asset as cash would have been if it had been received immediately. The growth of the assets through the increase of the claims would cause a correlative increase in the equity of that one of the partners, Mr. Badham, who was entitled to the profits prior to 1885. Therefore, since the asset was there prior to 1885, the profit, or increase in the proprietor's equity, was there also.

The fact that the accounts receivable from clients for work done prior to 1885 might not be converted entirely into cash, because of inability or other failure of the clients to meet their obligations, would not affect the determination of the profits, except for the fact that a reasonable allowance should be deducted from the profits to provide for these bad debts. A reasonable amount could be determined by the experience of the legal profession. In cases where it is impossible to make a reasonable allowance for bad debts because, for example, of lack of experience or statistical data, the profits are, of course, regarded as existing but quantitatively indeterminate for the time being; and it is necessary to postpone distribution of them until, by the process of converting them into cash, the degree of collectibility becomes established. Since this particular case was before the court in 1902, it would have been possible to deduct the actual bad debts for the period preceding 1885, for they were then known, so that the profits could have been found without the necessity for an estimate. This procedure would have been even more equitable than determining a reasonable allowance for bad debts.

When finally determined, these profits belonged to the period prior to 1885, the period in which the contractual relation between lawyer and client was consummated. Accounting and equity would say that, in view of the existing partnership, a reasonable proportion of the total fee for each piece of work begun but unfinished prior to 1885 should be allocated to the period preceding 1885. Barring failure of the lawyers to complete this work in a reasonably satisfactory manner, part of a valid claim or asset was in existence before 1885,

and the correlative profit was there with it. This correlative profit should have been added to the other profits belonging exclusively to Mr. Badham.

The profit and loss statement is a detailed and orderly summary of the fluctuations in a proprietor's equity during a period, from ordinary and usual business operations of that time. It contains practically the same information as the nominal accounts which are closed into the summary Profit & Loss account at the end of the fiscal period. The net result is added to the proprietor's equity if the business has been profitable, or subtracted from it if the business has been unprofitable. The extraordinary and unusual profits or losses of a business usually are added directly to or subtracted directly from the proprietor's equity without going through the same channels as the ordinary profits and losses, since it is generally convenient to compare the ordinary operations of each of the years in order to note the trend of the business. The balance sheet is a statement of assets and equities. All the assets and all the equities, including the equity of the proprietor or proprietors, as the case may be, appear upon it.

In this case the judge seems to sense that there is an asset, in the form of the accounts receivable, which would appear upon the balance sheet, for he says, "For the purposes of the balance sheet, no doubt, they would estimate that there is an outstanding asset which they hope to realize." But he does not understand that this increase in the assets must be matched by a corresponding increase in the proprietor's equity, which in this case is the profit, or his balance sheet will not balance. His proposition that the assets be included on the balance sheet but that "for the purpose of ascertaining the profit and loss—that is to say, what is to be divided—it seems to me that they must consider only what they have received," is impossible from an accounting point of view. American accountants would feel that the decision in this case would give to Mr. Williams moneys that rightly belonged only to Mr. Badham.

In an established concern having a fairly steady volume of business and cash receipts from year to year, the bad debts may be in direct relation to cash receipts over a period of years. In such a case the cash basis may be in close accord with the accrual basis and for that reason the cash basis may give approximately correct results, with little injustice. Under other circumstances the accrual basis is usually more equitable.

May, 1928

A. W. H.

GIRARD GROCERY COMPANY¹

WHOLESALE—GROCERIES

DIVIDENDS—*Declared on Current Earnings Despite Previous Impairment of Capital.* A wholesale grocery firm, which had sustained a serious impairment of capital in 1920, in the following year showed a net operating return. Although the return was small in comparison with the impairment suffered, the directors declared dividends on the strength of the current earnings. They continued to follow this policy until 1926, when the company became a bankrupt. In an action brought against the directors by the trustee in bankruptcy to compel return of the funds paid out as dividends, the court decided in favor of the trustee, concluding that the earned profits "reduced the impairment, and the declaration of the dividend again impaired the capital to the extent of the dividends declared." When the case was appealed, the Supreme Court of Pennsylvania upheld the decision of the lower court.²

(1928)

The Girard Grocery Company, a wholesale grocery firm of Philadelphia, Pennsylvania, became a bankrupt in 1926. Among the steps taken by the trustee in bankruptcy in settling the affairs of the company was an attempt to compel its directors to return certain funds which had been paid out as dividends. The dividends in question were alleged to have been wrongfully declared by the directors of the bankrupt corporation, on the ground that the financial condition of the company as of the date of their declaration was one of a capital deficiency.

A serious and admitted impairment of capital had been sustained by the Girard Grocery Company in the year 1920. The years immediately following had, however, disclosed a net operating return, although it was small in comparison with the impairment mentioned, and the directors had declared dividends on the strength of the current earnings thus indicated. This action, consistently repeated year after year from 1922 to 1926, was later defended by the argument that the impairment of the capital of the company had "occurred prior to the declaration of the

¹ Adapted from *Branch v. Kaiser, et al.*, 140 Atl. 498. Supreme Court of Pennsylvania, January 3, 1928.

² Headnote by Graduate School of Business Administration.

dividends in question, and all that the directors had done was to fail to reduce the impairment that existed." The attitude of the trustee was that the current profits should have been devoted to the reduction of the capital deficit. As was said by the first court in which the action was tried: "The earned profits . . . reduced the impairment, and the declaration of the dividends again impaired the capital to the extent" of the sums disbursed in their payment. This first court of trial, as might be gathered from the portion of its opinion quoted, decided in favor of the trustee in bankruptcy. The case was appealed, and most of the opinion of the court of appeal is given below:

The corporation in question, known as the Girard Grocery Company, was incorporated in 1908 under the laws of this commonwealth, for the purpose of carrying on a wholesale business principally in groceries and food products. The stockholders were confined to retail grocers to whom the company sold goods, the business accordingly being carried on in the nature of a cooperative organization. The original capital was \$175,000, later increased to \$1,000,000, divided into 10,000 shares of \$100 each, of which there was issued and outstanding at the time of the bankrupt proceedings, stock to the aggregate value of \$441,800. The business was prosperous from the start and by the year 1920 the corporation had accumulated a surplus of assets over liabilities of approximately \$171,000 and for a number of years, up to 1920, had declared and paid dividends. In that year, however, it met with financial disaster, suffering a loss of \$1,000,000, due, as claimed by respondents and admitted by the trustee, not to mismanagement, neglect, or wrongful practices on the part of the directors, but to a condition in the market for certain commodities, chiefly sugar and food products, which, to supply the demands of customers, it had bought outright and contracted for future deliveries, at the then prevalent high prices, but these suddenly enormously slumped, particularly sugar, large quantities of which the company had bargained for, in addition to immediate purchases, at prices ranging from 26 to 28 cents a pound, and which suddenly dropped to as low as 5½ cents a pound, entailing in this one item a loss of \$500,000. A similar amount was lost on purchases of food products. This occurrence culminated during the fiscal year of the company between July 1, 1920, and June 30, 1921. It was a post-war condition in the market which the directors could neither foresee nor prevent.

From inception of the corporation to its bankruptcy in 1926, respondents were continuously directors of the corporation, Kaiser being also president and Schoch holding the office of secretary.

It is averred in the bill of complaint, and not denied in the answer of defendants, that as a result of the \$1,000,000 loss in 1920, the corporation became in fact insolvent and the capital wholly or in part

impaired and dissipated. Up to 1920, the affairs of the company had been carried on prosperously, and the heavy loss of that year was in nowise attributable to neglect, mismanagement, or illegal practices on the part of the directors. At this point, respondents, who had the active management and control of the business, committed an error disastrous to them in every respect. Instead of acquainting the stockholders with the actual unstable financial condition of the corporation, for which they were blameless, facing the publicity of the unquestioned insolvency, of which they certainly had knowledge, and setting about for a legal adjustment of affairs, they deliberately adopted and put into practice a bold and reprehensible system of deception, designed to conceal the insolvency from the stockholders and the public with the expectation of recouping, by means of future business, the loss of the \$1,000,000, and thereby again place the company upon a sound financial standing. The situation was desperate, of course. There was practically no longer a surplus, and a manifest impairment of capital existed.

Respondents exercised a practically exclusive supervision over and management of the company's business and financial transactions, and in this situation appear to have experienced no difficulty in putting into effect their plans for an effective concealment of the loss of 1920 and to enable the company, as they hoped, to emerge financially rehabilitated from its troubles. These plans included false overvaluation of assets, refraining from notice of the \$1,000,000 loss in their reports, a presentation of false annual statements, and a diversion into dividends of profits that should have been applied to lessening the capital's impairment. A summary of these practices will show the extent and method of their operations. Beginning with the close of the fiscal year of 1921, they made no record in the company's books of the \$1,000,000 loss, gave no notice of it in their annual report, and merely noted in that report a deficit of \$22,756.87. In addition, they presented inflated inventory sheets, giving to the actual merchandise the company had on hand a cost valuation, when in fact the value had enormously decreased. The same methods of concealment, misrepresentation, and fictitious inventories were continued during the years down to and including 1925.

These methods and practices, as set forth in detail in the bill, are frankly admitted in respondents' answer, with the explanation, or excuse, that "the increase in the item of inventory was made with the intent and purpose of carrying on the business of the said Girard Grocery Company for the benefit of its stockholders." It is doubtless true that such was the actuating motive impelling respondents to resort to their fraudulent misrepresentations and concealments; it was, however, a practice which safe and honest business methods will not support and which the law will not tolerate. Where acts of directors are of such nature that they directly and primarily affect the interests of stockholders in their shares of stock, by diminishing their value or otherwise

injuring their rights, then the stockholders may sue to redress the wrong.³

Respondents, however, in the present case, did not stop with these deceiving representations and false inventories; a situation additional to these was necessary to sustain appearance of solvency. Something of a more tangible and satisfying nature was necessary to hold down suspicion and prevent possible investigation. There still remained unused an exceptionally effective proceeding for that purpose—that of declaring and paying dividends. The expectation of respondents that there would be profits made by the company after the loss in 1920 was not unfounded. Profits were realized, and in 1922 while still concealing the corporation's loss, and continuing the inflating of inventories and furnishing falsifying statements, with the organization in actual insolvency, a meeting of the directors was held, attended by respondents, at which a dividend was declared, followed by similar action in the succeeding years, down to and including 1925, the total amount thus paid out in dividends being in excess of \$132,000. The payment of these annual allotments, out of current profits, is admitted by respondents and justified by them on the ground that in the years of the payments, profits were realized from the business of the company and that the distributions were made out of profits accruing after the insolvency of 1920.

Nowhere in the record does it appear that the total of these profits, which respondents claim was in excess of the total of the dividends paid out, would have materially lessened the existing impairment of the capital had they been so applied. Nevertheless, the only proper and rightful use of these several amounts was to apply them, so far as they went, to the reduction of that deficit, and hence their application to the payment of dividends was, under the situation, clearly unjustifiable and illegal. There were in fact no profits or surplus, out of which alone dividends could be declared, available to these respondents for use as distribution payments. "Surplus" or "profits" denote an excess in the aggregate value of all assets of a corporation over the sum of its entire liabilities, including capital stock.⁴ Clearly, in the present case the profits made, totaling over \$132,000, were not sufficient to constitute a surplus over the sum of all aggregate liabilities of the Girard Grocery Company. The insolvency brought about by the million dollar loss in 1920 had not been lifted, and the reduced capital was never replenished. These profits should have been applied to the depleted capital, and so appropriated, there would have then remained no funds out of which to legally pay dividends. With the exception of distributions made in liquidation, dividends can be declared and paid out of net profits only, or, conversely stated, when the payment does not impair the capital stock of the corporation. Nor can an insolvent corporation declare and pay a dividend; and if the capital stock has

³ Thompson on Corporations, § 1313.

⁴ *Edwards v. Douglas*, 269 U. S. 204, 46 S. Ct. 85, 70 L. Ed. 235.

been impaired by the payment of the dividend, it is nevertheless unlawful, although the corporation is solvent at the time.⁵ Hence the absolute and legal duty of respondents, knowing a serious impairment of the capital existed, was to devote the profits here mentioned to the betterment of the company's shattered financial condition, instead of suppressing their wrongful management of its affairs and lulling suspicion on the part of stockholders by doling the accumulations out in the shape of dividend payments. In this connection we may adopt the conclusions of the learned court below, as follows:

It is argued by counsel for the respondents that the impairment of the capital occurred prior to the declaration of the dividends in question, and all that the directors did was to fail to reduce an impairment that existed. This argument overlooks the fact, however, that by declaring the dividends each year out of current profits, the directors illegally diverted funds which properly were applicable to a reduction of the capital deficit. The earned profits, therefore, reduced the impairment, and the declaration of the dividend again impaired the capital to the extent of the dividends declared.

In our opinion, we need not enter further into this discussion. It is undisputed that respondents by illegal methods made and continued concealment, from both the stockholders of the company and the public, of the precarious financial standing of the corporation, repeatedly inflating inventories of goods on hand, thus presenting a fraudulent overvaluation of assets, and, lastly, declared dividends, at the time the corporation was insolvent and its capital seriously depleted and impaired, out of profits that should have been used for its stabilization. The court below found the disbursements were illegal, under the Act of May 23, 1913 (P. L. 336; Pa. St. 1920, § 5786), and that the directors are personally liable for the dividends so declared. We concur in that judgment.

The decree of the court below is affirmed, at appellants' costs.

COMMENTARY: The principle embodied in the decision of *Branch v. Kaiser* has its roots in the following proposition: A corporation, through its directors, should be held responsible to stockholders and creditors for the exercise of reasonable care and diligence in preserving the productive integrity of their investment. To the creditor this means the full liquidation of his claims, as a mere by-product of the normal processes of business operation; to the stockholder it means the continuation of earnings, or at least the continued presumption that the promise of earnings still exists, as evidenced by the unimpaired presence of an investment presumably capable of paying its way. As the court indicated, disaster may of course overtake an enterprise without fault on anyone's part; but where an event has occurred which

⁵ 14 C. J. p. 800.

weakens the presumption of recovery and return as initially inferred by the stockholder and creditor interests, directors may bring rightful blame upon themselves by acting as if that presumption were still intact. This we may speak of as a particular application of the principle, inasmuch as we may infer from the words of the court that the general rule would not permit of dividends, even though all parties had been informed of the capital impairment. That is to say, as applied by the court in the above case, the general rule is that dividends may be declared only out of a conservatively measured balance sheet surplus; that the current income account is only of secondary importance, or at most but a means by which the surplus of the company, thus constituting the primary index as to the availability of distributable funds, may be modified for better or worse.

Thus the rule seems to take for granted that the original "capital stock" fund of a company continues indefinitely to constitute its necessary operating capital, as well as the fund on which creditors may rely as a protective reservoir; and that all parties consenting could not therefore agree to undertake future operations on a diminished capital, at all events without taking the accepted steps of a statutory reduction of stated capital. Of course, where the basic assumption here understood is true, there is little question as to the soundness of the rule. Unpredictable losses of capital—in the sense of a fund to finance normal fluctuations in dollar value as well as capital in the physical sense—should be made good to no less an extent than those regular outflows of capital value which are recognized as accompanying daily operations, and which are regularly provided for by charges against revenue. Illustrative of what is meant in this latter connection are fire-insurance premium expense and the charge for depreciation. Where at all feasible, good management attempts to make provision for the former as well as for the latter, even at the cost of excessive conservatism in reporting available profits.

But in any event it is clear that, in the present instance, with its admitted facts of misrepresentation, the decision of the court could not have been otherwise than it was. The dividends in question were presumably prejudicial to the rights of both prior and subsequent creditors, under the circumstances, and certainly of those of the unsuspecting stockholders, in whose business affairs those of the Girard Grocery Company must have constituted a consideration of major importance. Even in the celebrated English case of *Verner v. General and Commercial Investment Trust*, 2 Chancery 239, in which the court held that a capital impairment and a dividend were contemporaneous possibilities, it was nevertheless said that " . . . capital lost must not appear in the accounts as still existing intact;" that the "accounts must show the truth, and not be misleading or fraudulent."

In the way of further comment on this English case, however, it is interesting to inquire as to the business principles which might be said to support the general permissibility of dividends where, although solvent as to creditors, a company has nevertheless suffered a substantial impairment of its "stated capital." For this purpose we should have to assume a certain divisibility of the physical investment which is by no means a condition generally characteristic of the business establishment. Let us suppose, however, that, like the court in *Verner v. General and Commercial Investment Trust*, we are faced with a situation in which a significant degree of flexibility attaches to the physical requirements of the capital fund. Under these circumstances we could permit the loss of an appreciable portion of the physical capital and still leave the business to continue as an effective operating entity whose investment still retains the basic investment characteristics which were contemplated in the promotion plans. In short, we should be permitting a loss in size only, without sacrificing the organic unity of the business. But if we contrast such a situation with one in which the loss of a physical unit of the investment would tend to paralyze the entire capital structure, we can easily see the condition under which the original "capital stock" would constitute the minimum fund for which all available subsequent profits would be no more than a natural means of restoring depleted resources. An extreme illustration of this is the case of a paper-box plant which, making its own paper box-board and designing and printing the finished stock, sustained a major loss through the destruction of its printing unit by cyclone. The management was able to engage outside printing establishments to aid it in temporarily maintaining the production schedules of the company, but the arrangement could presumably be no more than a temporary expedient. In this connection it may be asked whether the Girard Grocery Company could have contracted its activities to the extent that smaller inventory reserves would have enabled it to operate effectively, with the only change the lessened scale of trading, and without the compensating disadvantages which might render the adjustment economically inadvisable.

Thus net profits can not be said to exist at the same time that a corporation is suffering from a depletion of its necessary physical equipment, which includes or implies the possession of sufficient capital reasonably to insure the economic and engineering replacement of that equipment. Notwithstanding the acceptance of the truth of this proposition, however, where the physical investment may be divided, with a lessened portion still an effective producing unit—only on a smaller scale—there is little reason to hold that a given capital impairment should preclude the declaration of dividends from subsequent profits without the usual attendant liabilities. This, of course, assumes

that prior creditors are amply protected by the net assets remaining against the possible losses incident to the realization shrinkages of failure. It further assumes that subsequent creditors are fully informed as to the smaller operating investment, and that stockholders, although still retaining their original holdings, have been notified that the capital impairment has been accepted as final and as a basis for a permanent adjustment of the operating investment. Such an arrangement would, of course, be equivalent (in a business sense, at least) to a formal reduction in the amount of stated capital through stock donation under regular state supervision.

It is of still further interest to note that the counsel for defendants apparently drew on English law for their contention that, although a prior loss was regrettable, it was nevertheless an event of the "dead past," to pay for which the company was not obligated to draw on future returns of a favorable character. The English law seems definitely to be that the dividend status of a company is to be determined from its current income account. Neither a prior nor a current capital loss, any more than a past accumulated operating deficit, is there permitted to stand in the way of a dividend, provided the current income account furnishes a credit balance. Broadly speaking, the English rule seems to be that the capital account and the revenue account are "two distinct and separate accounts," and that a given current operating loss merges historically into a direct capital loss. As was said by Lord Justice Lopes (as quoted in *Verner v. General and Commercial Investment Trust*, 1894): " . . . The capital and revenue accounts appear to me to be distinct and separate accounts, and, for the purpose of determining profits, accretions to and diminutions of the capital [meaning "permanent" or fixed capital] are to be disregarded." In *Ammonia Soda Company v. Chamberlain*, 1 Chancery 266 (1918) Justice Petersen said: "If during the year there is no balance to the credit of the profit and loss account, any dividend which is paid must be provided out of the paid-up capital, and any such payment must reduce the paid-up capital. Such payment is clearly a reduction of paid-up capital, and is *ultra vires*. But where a company has made losses in past years and then makes a profit out of which it pays a dividend, the question is a different one. Such a dividend is not paid out of paid-up capital . . . such a payment does not involve the reduction of capital; it involves a failure to make good capital which has already been lost." From these few but unequivocal sentences the reader can get a very good idea as to the weight of ruling opinion in English law—as well as the impression that the concept of the corporate "estate" may have been lost to the English jurists in the fog of half-understood distinctions between fixed and "circulating" capital, and between the exploitation of wasting properties and the

operation of manufacturing and trading establishments. At all events, it may be supposed that the weight of American statutory and decision law, as indicated by the decision of the Girard case, looks with much better understanding to the ultimate good of economic society. And this is true, although in a given case it might be found that the rule of balance sheet surplus would work a hardship on those who, having taken their loss, without prejudice to creditors, are both able and willing to proceed effectively on the restricted basis.

March, 1929

R. G. W.

SWASTIKA WOOLEN COMPANY¹

MANUFACTURER—TEXTILES

ACCOUNTING—*Adjustment of Operating Statement to Reflect Management Responsibility.* A woolen manufacturing company, which for several years had experienced increasing difficulty in operating, on Oct. 1, 1927 was placed under the management of a new treasurer. When, at the end of the year, a summarized operating statement for the quarter was prepared for presentation to the company's directors, the treasurer objected to the inclusion in operating costs of the loss sustained in the liquidation of old inventories, maintaining that the resulting figures did not reflect accurately the results of operations during the first three months of his control. Consequently, the treasurer revised the operating statement by removing from operating costs the excess of inventory valuation on old stocks sold over the proceeds of such sales, by removing also the adjustment of inventory for expected losses on further liquidation of stocks, and by entering these items in a separate section of the statement.

(1927)

In October, 1927, the Swastika Woolen Company began operating under the direction of a new treasurer. When, at the end of the year, the usual quarterly operating statement was prepared for presentation to the directors, the treasurer objected to some of the items on the ground that they did not reflect accurately the results of operations during the first three months of his control.

The Swastika Woolen Company was one of the old established textile manufacturers of New England. During its life of approximately a century it had enjoyed a reasonable share of prosperity, and had developed into a large organization. Until, about 1920-1921, the general condition in the industry became one of marked depression, the company had shown satisfactory earning power and had built up a considerable surplus. After this time the company experienced increasing difficulty and failed even to maintain its relative position in the industry. In 1924 the company's operating statement showed a profit of about \$35,000;

¹ Fictitious name.

but the payment of dividends in excess of this amount resulted in a net decrease of surplus for the year. In 1925 and 1926 the company suffered losses, that of the latter year amounting to nearly \$350,000 on sales aggregating \$2,800,000. The loss for the first nine months of 1927 was approximately \$105,000.

During 1927, the directors of the company were divided in opinion as to the desirability of continuing operations. The majority believed that the textile industry in general was beginning to improve, and that the Swastika Woolen Company under efficient management would have favorable possibilities of operating at a profit in the near future. Several of the directors, however, favored liquidation. They were not convinced of the likelihood of profitable operation under existing conditions. They pointed out that attempts of the company to enter the specialty field during the last two years had not met with success, and consequently they held little hope for the future. The directors who wished to continue the business were of the opinion that a change of management would do much toward improving the company's position. They believed that the existing management had not shown the ability necessary to cope with new developments in the textile field, and that the company's failure to enter the specialty market profitably was the result of a lack of adaptability on the part of the management rather than of an inherent operating weakness. The company had been laboring under conditions of such severe depression for several years and the existing management had been subject to such continual strain that it seemed unlikely that the morale of the organization could readily be restored. It was finally agreed that a change of management should be effected, though the minority directors favoring liquidation did not feel convinced that even this action would be of much use in rehabilitating the company's affairs.

The resignation of the treasurer, who had been the managing head of the Swastika Woolen Company, was accepted and a new treasurer took charge on October 1, 1927. The new treasurer was a much younger man than his predecessor. He had had no special technical training in the textile field, but had an extensive background of general marketing and financial experience. Since the directors believed that the company's problem was essentially one of marketing, particularly with respect to development in the specialty field, the choice of such a man rather than of a textile

expert trained under past conditions in the industry seemed to them to be wise.

After a brief examination of the company's accounts, the new treasurer concluded that the values shown therein, which are reflected in the balance sheet given in Exhibit 1, were not accurate.

EXHIBIT 1

BALANCE SHEET OF SWASTIKA WOOLEN COMPANY
OCTOBER 1, 1927

ASSETS		LIABILITIES	
Plant.....	\$2,535,430.37	Notes Payable.....	\$1,534,507.80
Suspense.....	5,021.58	Accounts Payable.....	11,940.12
	<u>\$2,540,451.95</u>	Interest Accrued.....	9,328.79
Cash.....	437,441.07	Taxes Accrued.....	44,556.91
Receivables.....	967,202.50	Depreciation Reserve.....	865,267.18
<i>Inventories</i>		Surplus.....	\$765,569.22
Wool.....	\$ 16,866.11	Loss—1927.....	<u>105,717.67</u>
Mill.....	<u>921,181.91</u>		659,851.55
	938,048.02	Capital Stock.....	1,809,500.00
<i>Prepaid</i>			
Insurance....	\$ 42,804.06		
Interest.....	6,399.80		
Freight.....	<u>2,604.95</u>		
	51,808.81		
	<u>\$4,934,952.35</u>		<u>\$4,934,952.35</u>

In particular, the treasurer believed that the valuation of the inventories was too high. The business of the company had been built up mainly on certain staples in the production of which the company had been a leader. In recent years, however, the demand for these staples had declined almost to the point of disappearance. Under the former management the company had continued to produce staples for stock despite the obviously unfavorable movement of the market, and as a result the inventory included thousands of yards of such goods carried at an excessive price. Another element which the new treasurer believed to have been partially responsible for inflation in the inventory value was the production of "fancies," or specialty goods, for stock. An attempt had been made to enter the specialty field, but without much success; the management had adopted the policy of producing for stock, any line which showed possibilities of a large sales volume, although it was clear that for style goods of this sort changes in the market demand characteristically were abrupt and extreme. The new treasurer and the majority of the directors believed that the only reasonable course to pursue was to dispose of these obsolete items in the inventory as soon as possible at any price that could be obtained.

In order to secure an independent statement of the condition of the business at the time when he assumed its management, the new treasurer engaged a well-known firm of public accountants to examine the books and accounts and to prepare a revised balance sheet as of October 1. This examination was made in December, and the resulting balance sheet is shown in Exhibit 2.

EXHIBIT 2

REVISED BALANCE SHEET OF SWASTIKA WOOLEN COMPANY
AS OF OCTOBER 1, 1927

ASSETS			
<i>Current Assets:</i>			
Cash.....		\$ 372,320.96	
Accounts Receivable.....	\$952,618.90		
Less: Reserve for Doubtful Ac- counts.....	17,010.00	935,608.90	
Inventories.....		890,951.71	
Total Current Assets.....			\$2,198,881.57
Investments.....			583.60
Deferred Charges.....			73,253.71
Fixed Assets.....		\$2,537,190.81	
Less: Reserve for Depreciation..		954,571.18	
Total Assets.....			\$3,855,392.51
LIABILITIES			
<i>Current Liabilities:</i>			
Notes Payable.....		\$1,456,107.80	
Accounts Payable.....		30,056.53	
Accrued Items.....		66,483.95	
Total Current Liabilities.....			\$1,552,648.28
Capital Stock.....			1,809,500.00
Surplus—as adjusted.....			493,244.23
Total Liabilities.....			\$3,855,392.51

Note—Contingent liability for additional federal taxes for 1923—\$22,750.00 and interest thereon.

The changes, other than those minor adjustments which did not affect the net worth, are indicated in the following reconciliation of the surplus shown on the company's books with that shown on the balance sheet as submitted by the accountants. None of the auditors' adjustments was entered on the books.

EXHIBIT 3

RECONCILIATION OF SURPLUS ACCOUNT OF SWASTIKA WOOLEN COMPANY
WITH SURPLUS SHOWN ON REVISED BALANCE SHEET

Surplus balance—as per books.....		\$659,851.55
Deduct:		
Adjustment of inventories to cost or market value, whichever is lower.....	\$60,282.91	
Provision for losses on doubtful accounts.....	17,100.00*	
Additional depreciation on plant.....	89,250.00†	
Miscellaneous adjustments (net).....	64.41	166,607.32
Surplus as per balance sheet.....		\$493,244.23

* The provision for losses on doubtful accounts was set up by the accountants after careful scrutiny of the receivables, and was considered adequate to meet probable losses of this character.

† The adjustment for depreciation was made to record the depreciation in addition to that recorded on the books on the basis allowed by the Internal Revenue Department as deductions on the company's tax returns.

As stated above, the adjustment of inventories on the revised balance sheet was made necessary mainly by the presence of an excessive quantity of obsolete staples and fancies in stock. The resultant figure of \$890,951.71 was considered to be as reasonable an estimate of the value of the inventories as could be made at the time, although it was recognized by the accountants and stated in their report that further losses might occur in the liquidation of old stocks. The most readily marketable stock already had been sold at the time of their examination of the accounts. It was doubtful whether the gross profit on the balance of the merchandise to be disposed of would be sufficient even to offset the expenses of liquidation and overhead charges.

The auditors' qualification relative to possible further losses on inventory liquidation proved to be correct. At the end of the final quarter of the year, the records showed that on "clean-up" sales of old cloth, goods inventoried at \$413,988.55 had been sold for \$346,893.40, a loss of \$67,095.15, and that all the old yarn inventoried at \$16,623.20 had been sold for \$12,514.21, a loss of \$4,108.99. After a careful study of the inventory on December 31, the treasurer estimated that additional losses amounting to \$8,926.42 probably would be sustained on liquidation of old cloth stocks. The inventory at the end of the year was adjusted to a valuation which allowed for this expected shrinkage. The company's summarized operating statement for the quarter ended December 31, in agreement with the books and after all closing and adjusting entries, appears in Exhibit 4.

EXHIBIT 4

OPERATING STATEMENT OF SWASTIKA WOOLEN COMPANY FOR THREE MONTHS ENDING DECEMBER 31, 1927

	Cloth	Yarn	Total
Sales.....	\$640,300.76	\$114,846.79	\$755,147.55
Operating Costs.....	724,712.44	102,396.92	827,109.36
Operating Loss before Interest Charges	\$ 84,411.68	\$ 12,449.87*	\$ 71,961.81
Net Interest Charges.....			11,185.01
Operating Loss after Interest Charges.....			\$ 83,146.82
Extraordinary Losses from Bad Debts....		\$ 8,941.73	
Price Allowance for Defective Goods....		5,268.40	
Losses on Rental of Tenements.....		5,462.25	
Unabsorbed Process Costs.....		5,673.23	25,345.61
			\$108,492.43
Nonoperating Income.....			3,601.09
Net Loss for Period.....			\$104,891.34

* Profit.

In this statement operating costs represented manufacturing expenses (including inventory variation), selling expenses, and administrative expenses. Interest paid was not charged into the cost of goods manufactured, but was shown as a separate item. It was not the practice of the company to make allowance for bad debts in its operating expenses, but the amount actually charged off in any period usually was included in operating costs. The figure shown on the above operating statement, however, as "Extraordinary Losses from Bad Debts" was much higher than the normal amount; the excessive amount incurred in the final quarter therefore was shown as a nonoperating expense. The item "Price Allowance for Defective Goods" was the amount allowed customers on certain goods shipped in the preceding quarter. "Losses on Rental of Tenements" represented the excess of charges for maintenance of houses rented to employees over the rentals received therefrom. The item shown as "Unabsorbed Process Costs" represented manufacturing costs incurred to date on all goods in process. It was the practice of the company to inventory goods in process at "grey" cost only, deferring the absorption of dyeing and finishing manufacturing costs until the goods were completed, and to show the manufacturing costs accumulated on goods in process on the operating statement in this way. The item "Nonoperating Income" represented profits realized on the sale of raw wool and the amount collected on an

account receivable which previously had been written off as worthless.

The operating statement thus arranged presented the net results of the company's operations for the quarter in summary form and ordinarily would have been satisfactory for presentation to the directors. Because of the special circumstances at this time, however, the treasurer believed that the statement as prepared did not reflect accurately the results of operations. As previously stated, several of the directors had persisted in their belief that the company should be liquidated, and had consented to continued operation only with reluctance and with considerable skepticism concerning its advisability. Their future action would depend largely on the results of operations during the last quarter of 1927, and the treasurer's report for that period, therefore, was of great importance and would be viewed with critical interest. An operating loss, before interest charges, of \$71,961.81, would not tend to lessen their desire for liquidation, nor to increase their confidence in the possibilities of profitable operation in the future. The treasurer believed that such a presentation of the situation was not a fair reflection of the results of his management, since the operating costs shown on the statement included certain expenses and losses over which he had no control and for which he should not be held responsible.

The principal loss of this nature was that resulting from the liquidation of old inventories. The book inventories had not been adjusted at the beginning of the period to reflect the estimated loss on liquidation as stated by the accountants in their report of the company's condition on October 1. Hence the entire loss on "clean-up" sales, as well as the estimated loss on future sales, for which the inventory had been adjusted at the end of the period, was included in the operating costs. The present treasurer was not in any way responsible for the existence of these "frozen" items in the inventory, and in liquidating them was obtaining the best possible price and minimizing as far as possible an inevitable loss. It seemed clear that these losses should not be included with those costs for which the treasurer was responsible.

The treasurer, therefore, revised the operating statement by taking out of operating costs the excess of inventory valuation on old stocks sold over the proceeds of such sales, thereby leaving neither profit nor loss on these sales in that section of the statement

representing operating results for which he might reasonably be held responsible. The adjustment of inventory for expected additional losses on further liquidation of stocks was also removed from this section of the statement. As a result of these changes, the revised statement for presentation to the directors appeared as shown in Exhibit 5.

EXHIBIT 5

REVISED OPERATING STATEMENT OF SWASTIKA WOOLEN COMPANY,
FOR THREE MONTHS ENDING DECEMBER 31, 1927

	Cloth	Yarn	Total
Sales.....	\$640,300.76	\$114,846.79	\$755,147.55
Operating Costs.....	648,690.87	98,287.93	746,978.80
Operating Margin before Interest....	\$ 8,390.11*	\$ 16,558.86	\$ 8,168.75
Net Interest Charges.....			11,185.01
Operating Loss after Interest Charges.....			\$ 3,016.26
Loss on Clean-up Sales Cloth.....		\$ 67,095.15	
“ “ “ Yarn.....		4,108.99	
Inventory Adjustment on Old Stocks...		8,926.42	
Extraordinary Losses from Bad Debts..		8,941.73	
Price Allowance for Defective Goods...		5,268.40	
Losses on Rental of Tenements.....		5,462.25	
Unabsorbed Process Costs.....		5,673.23	105,476.17
Nonoperating Income.....			\$108,492.43
Net Loss for Period.....			3,601.09
			\$104,891.34

* Loss.

COMMENTARY: This case serves as a striking illustration of the desirability of presenting accounting information in such form as to reflect responsibilities as accurately as possible. In this particular instance, the importance of doing so was rendered greater than usual because of the change of management, and the consequent need of allocating responsibility properly. The very continuance of the business was involved, and the directors were watching the results of operations under the new treasurer as a guide to planning future policies. The operating statement in its original form failed to distinguish in any way between results for which the new treasurer might fairly be held responsible and those over which he had no control.

By removing from the operating costs of the quarter during which the new treasurer had been in charge the gross loss on clean-up sales already made and the estimate of probable further losses in liquidation of old inventories, a new statement was produced which reflected more closely the operating margin on current operations.

It should be noted, however, that such a revision of the statement was only a partial correction. While the operating margin for which

the new treasurer was responsible was now more accurate, its component elements, i.e., sales and operating costs, were still incorrectly stated. The sales figure had not been changed, and consequently included clean-ups in addition to current sales. The operating costs, on the other hand, had been adjusted by removing the loss on clean-ups therefrom, leaving in the operating costs for such sales an amount which exactly offset the sales price. Thus, while as a result of the revision the margin between sales and operating costs was corrected, it still was not possible to read from the statement the amount of sales other than clean-ups or the cost of such sales, nor to judge of the efficiency of the new management through the operating ratio. It would seem that the proper way to alter the operating statement would have been to remove from sales the proceeds of clean-ups, and from operating costs the inventory value of such clean-ups, leaving in the first section of the statement only sales and the cost thereof which might properly be considered as transactions for which the new management could be held responsible.

Such a statement should have emphasized the fact that the Swastika Woolen Company had undergone a major change in management. This change had taken place in lieu of the usual processes of liquidation, and it had this practical significance: the operating report of the company should have been so stated as to distinguish between large inherited losses chargeable to the old management and the results of the new executive's efforts toward operating rehabilitation.

March, 1929

K. G. D.

MID-WEST ELECTRIC CORPORATION¹

INVESTMENT COMPANY

ACCOUNTING—*Stock Dividends Included in Income Statement at Market Value.*

A company engaged in investing in the securities of public utility holding and operating companies, authorized an issue of \$20,000,000 in 6% convertible debenture bonds. In the bond circular accompanying this issue, the company listed, as its chief item of income for the preceding year, the market value of the stock dividends which it had received from the public utility operating company in which it had its principal investment.

(1927)

The Mid-West Electric Corporation, organized in 1912, was engaged in investing primarily in securities of public utility holding and operating companies. Its principal investment was in the common stock of the Central West Utilities Company,¹ in which company it was the largest stockholder, owning 917,214 shares on December 31, 1926.

In order to increase its holdings, retire outstanding obligations, and liquidate certain indebtedness, the Mid-West Electric Corporation authorized an issue of \$20,000,000 in 6% convertible debenture bonds in December, 1927. The bond circular accompanying this issue contained the following information regarding income:

The income and expenses of the company for the year ended December 31, 1926, as certified by public accountants, and for the year ending December 31, 1927, as estimated by the company, based on results for the period of 11 months and 16 days ended December 16, 1927, as certified by such accountants, were as shown on the opposite page.

Dividends had been paid by the Central West Utilities Company on its common stock without interruption for 18 years. For more than four years these dividends had been paid in common stock at the quarterly rate of $2\frac{1}{2}\%$.

¹ Fictitious name.

MID-WEST ELECTRIC CORPORATION

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	1926	1927
Dividend Income		
Stock Dividends.....	\$4,378,252.00*	\$4,874,261.00*
Cash Dividends.....	88,092.00	66,592.80
Other Income.....	268,766.00	1,058,215.20
Total Income.....	\$4,735,110.00	\$6,019,069.00†
Total Expenses and Taxes.....	98,326.00	60,881.00
Balance before interest and amortization of debenture discount.....	\$4,636,784.00	\$5,958,188.00
Annual interest requirement on these \$20,000,000 debentures.....	1,200,000.00	1,200,000.00

* Represents dividends received in common stocks of the Central West Utilities Company taken at the approximate market value of such common stock immediately following the date of record for each dividend, such value averaging approximately \$51 a share for 1926 and \$54 a share for 1927. The present market value of the Central West Utilities Company common stock is approximately \$60 a share.

† This total was published in the bond circular referred to, although it is obvious that it must be wrong, if the figures given for income are correct. A correct addition would give a total of \$5,999,069.00. The balance before interest and amortization of debenture discount would be changed to \$5,938,188.00.

The consolidated income and surplus statements and capital accounts of the Central West Utilities Company, as certified by its auditors and stated in its annual report for 1927 to its stockholders, are given in Exhibits 1, 2, and 3.

EXHIBIT 1

CONSOLIDATED INCOME STATEMENT OF CENTRAL WEST UTILITIES COMPANY, DECEMBER 31, 1926 AND 1927

	Year Ended Dec. 31, 1926	Year Ended Dec. 31, 1927
Gross Earnings.....	\$139,020,559.74	\$146,600,211.24
Operating Expenses, Maintenance and Taxes.....	77,259,453.40	78,370,355.52
Net Income from Operation.....	\$ 61,761,106.34	\$ 68,229,855.72
Other Net Income (Including profit on sale of property and other credits).....	4,972,129.63	3,627,258.31
Total.....	\$ 66,733,235.97	\$ 71,857,114.03
Deductions:		
Interest Charges (Including amortization of Bond Discount and Expense).....	19,697,556.23	21,330,974.81
Deferred Dividends of Subsidiaries.....	10,026,522.30	10,760,088.54
Minority Interests.....	1,643,236.04	1,682,154.52
	\$ 31,367,314.57	\$ 33,773,217.87
Balance for Depreciation, Dividends and Surplus.....	\$ 35,365,921.40	\$ 38,083,896.16
Appropriations for Depreciation Reserves..	14,289,712.76	14,978,318.66
Balance for Dividends and Surplus.....	\$ 21,076,208.64	\$ 23,105,577.50

HARVARD BUSINESS REPORTS

EXHIBIT 2

CONSOLIDATED SURPLUS STATEMENT OF CENTRAL WEST UTILITIES
COMPANY, DECEMBER 31, 1927

Capital Surplus (Premium on Capital Stock)....	\$28,585,959.41
Undivided Profits:	
Balance, Dec. 31, 1926.....	\$50,576,684.33
Balance of Income, year ended Dec. 31, 1927...	23,105,577.50
	<u>\$73,682,261.83</u>
Deduct:	
Dividends on Stock of Central West Utilities Company:	
Preferred.....	\$2,184,026.00
Common (Paid in Common Stock).....	5,210,126.00
	<u>\$7,394,152.00</u>
Unamortized Discounts and Expense and Premium on Bonds Retired—Amount Written Off.....	4,158,779.08
Other Charges to Undivided Profits—Net.....	498,995.85
	<u>12,051,926.93</u>
Undivided Profits, Dec. 31, 1927.....	<u>61,630,334.90</u>
Total Surplus, Dec. 31, 1927.....	<u>\$90,216,294.31</u>

EXHIBIT 3

CAPITAL ACCOUNTS OF CENTRAL WEST UTILITIES COMPANY, DECEMBER
31, 1926 AND 1927

	Dec. 31, 1926	Dec. 31, 1927
Six per cent Accumulative Preferred Stock (Authorized 2,000,000 shares, \$50 par value):		
Stock.....	\$ 36,400,200.00	\$ 36,400,500.00
Scrip.....	2,700.00	2,400.00
	<u>\$ 36,402,900.00</u>	<u>\$ 36,402,900.00</u>
Common Stock (Authorized 10,000,000 shares without nominal or par value):		
Stock.....	\$ 48,972,800.00	\$ 54,051,990.00
Scrip.....	123,060.00	126,360.00
	<u>\$ 49,095,860.00*</u>	<u>\$ 54,178,350.00†</u>
Preferred Stock of Subsidiaries.....	164,660,896.36	171,063,309.32
Minority Interests in Capital and Surplus of Subsidiaries.....	11,698,403.71	11,210,015.69
Dividends Payable in Common Stock.....	1,223,515.50	1,351,140.60
Funded Debt of Subsidiaries.....	418,037,880.00	441,917,221.54
Less amount deposited with Trustees...	66,698,220.00	62,993,820.00

* Represented by 4,909,586 shares of \$10 par value.

† Represented by 5,417,835 shares without nominal or par value.

In this report the vice president and general manager stated that "the increase of \$5,082,490 in common stock and scrip of the Central West Utilities Company was due entirely to the issue of common stock in payment of dividends."

The stock dividend declared in 1927 was at the rate of \$10 a share, despite the shift from stock of \$10 par value to no par value stock. Though dividends of \$5,210,126 were declared, representing 521,012.6 shares of common stock, the capital stock account showed an increase of only \$5,082,490, or 508,249.0 shares, a discrepancy of \$127,636.

COMMENTARY: A cursory glance at this case informs the reader of several facts: First, the corporation, which is a public utility corporation, was following the practice of taking stock dividends from the various holding and operating companies in which it held stock into its income statement at market values; second, the corporation was issuing \$20,000,000 of 6% convertible debentures which carried an annual interest charge of \$1,200,000; third, on December 31, 1926, the company owned approximately 19% of the capital stock of the Central West Utilities Company; fourth, approximately 81% of the company's total income, from which the interest charges on the new debentures must be met, was composed of the stock dividends taken at market values; and fifth, the dividends paid on common stock, as presented in the consolidated surplus statement of the Central West Utilities Company, amounted to \$5,210,126, which represented 521,012.6 shares of common stock, whereas the capital accounts of that company during the year 1927 showed an increase of only \$5,082,490, or the equivalent of 508,249 shares, there being an apparent discrepancy of \$127,636.

It appears that if some conclusion can be formulated as to the soundness of the practice of taking up stock dividends on the books of the Mid-West Electric Corporation at market values, the problem here presented will be to a great extent solved, for, after all, the immediate question is whether the Mid-West Electric Corporation would have sufficient income annually to meet the \$1,200,000 interest charges on the new debentures. It is obvious that if accounting for stock dividends received at market value is unsound, the company would not have sufficient income to meet its interest charge, because the cash dividends and other income amounted to only \$1,124,808. This means that if the company continued on its existing income basis, it would lack at least \$136,073 each year for meeting the annual fixed charges upon the debentures.

In regard to the treatment of stock dividends received, there are at least three possible methods of accounting: first, the one used here of taking the stock dividends received into the income statement at their market value; second, that of taking the stock dividends into a company's income statement at a value representing the proportionate share of the earned surplus for the year to which the company is entitled, by virtue of the fact that it holds a certain percentage of the operating company's capital stock; and last, that of treating the stock dividends as only a further subdivision of the shares representing the original investment, which has nothing to do with income. This last practice, as is common knowledge, was firmly established by the celebrated case of *Eisner v. Macomber*, 252 U. S. 189 (1920).

In the case of the Mid-West Electric Corporation, if market values were to be taken as the basis for accounting for stock dividends, the cash dividends and other income items remaining the same, it must be clear that the company's only possible chance of meeting its annual interest charges was to sell some of the shares of stock that it received as dividends. This means that presumably to that extent it would lessen its voting equity in the Central West Utilities Company. It is likely that the Mid-West Electric Corporation would be loath to take this action, since the 19% holding which it had on December 31, 1926, probably gave it effective control of the Central West Utilities Company. Presumably the corporation would desire to retain that control if possible and not dilute its interest by selling any of the shares received in the form of dividends. The only other possibility, then, by which the Mid-West Electric Corporation might safeguard itself was the assumption that the Central West Utilities Company at some early future date would declare a rather large cash dividend. Such a dividend would replenish the cash account of the corporation, which each year would have gone down because of the heavy interest charges not covered directly by current cash earnings. Since there would be a disadvantage in selling the shares in order to get additional cash, and since the possibility of the Central West Utilities Company's changing from a stock dividend to a cash dividend policy was problematical, it would seem unwise in any case for the Mid-West Electric Corporation to take up in its income statement at market values the stock dividends it received.

If it is true that the 19% stock holding virtually gave the Mid-West Electric Corporation effective control, there might be some justification for the corporation's taking its stock dividends received as income at a value which would represent capitalizing the share of the year's earned surplus to which it was entitled, or, in other words, taking up on its books 19% of \$23,105,577.50, or \$4,390,059.73. Even if this practice were followed, however, it would not solve the problem, for although

there might be some justification for going as far as this in accounting for stock dividends received, the Mid-West Electric Corporation still would not have received any cash from its stock dividends which could be used to meet interest charges. Therefore, about the only statement that can be made regarding this policy is that the stockholders would not be quite so badly misled in reading the income statement in this instance as they would be under the present practice of the company.

From the foregoing, both methods discussed having been virtually ruled out, it begins to appear that the wiser practice would be to conform to the policy of not treating stock dividends as income until such shares of stock are sold. This is the soundest practice and is certainly the only practice that represents the truth, for until the shares received are converted into cash, a company has no income over and above what it would have had without the additional shares. Therefore, an income statement should not be so constructed as to lead a reader of the statement to believe that something had been received when in reality it had not. This only leads to the conclusion that where any practice other than the one just discussed is used, ample footnotes or informative data explaining the practice followed by the company should be attached to its income statements, so that in no case would anyone using the statements or referring to them be misled because of lack of information regarding the practice which the company happened to be following.

As to the discrepancy in the number of shares of stock paid out in dividends, which can be computed from the capital accounts and the consolidated surplus statement of the Central West Utilities Company, we find, as stated in the problem, that the difference amounts to \$127,636. This discrepancy apparently can be accounted for in the statement of capital accounts of the Central West Utilities Company under the title of "Dividends Payable in Common Stock," because if the difference between the \$1,351,140.60 and the \$1,223,515.50 is taken, \$127,625.10 is obtained, which apparently accounts for the dividends declared but not yet paid. The discrepancy of \$10.90 very likely represents a fractional share which would be taken care of in cash, so that the \$127,636 difference can be accounted for.

If there are so many bad features attached to taking stock dividends as income, regardless of the price or value, the question might be asked why any company should be foolish enough to account for them in this manner. The answer seems to be that the market prices for the stock will be higher if stock dividends are paid than if cash dividends were paid, for the reason that if a concern earned, let us say, \$11.25 a share but paid a cash dividend of something like \$3.50 a share, as is the customary practice, the stock would not look nearly so attractive to prospective investors. If stock dividends were paid, the market

price, in most cases at least, would be worth book value and probably more, because of the fact that a shareholder could elect to sell his stock dividends and get cash, whereas with a cash dividend he has no option unless he wishes to sell part of his original investment. There is also the fact that the continued paying of stock dividends may tend to bring the stock price more nearly within the range of the average investor, whereas, if the original number of shares was not changed, the price, providing the concern were profitable, would tend to increase year after year until it would be somewhat out of the range of a great number of possible investors.

July, 1929

P. B. C.

APPEAL OF FIRST NATIONAL BANK OF ST. LOUIS¹

ACCOUNTING—*Capitalization of Organization Expenses.* In connection with the consolidation of three banks into one organization, the sum of \$30,000, representing attorney's fees and payment for overtime work of employees, was spent and charged by the bank to expense. This amount was deducted by the bank on its income tax return for the period, but was disallowed by the tax commissioner. The Board of Tax Appeals decided that, since the transaction which called forth the expenditures in question presumably was one which would result in increasing and maintaining the earning power of the taxpayer, they should be treated as a capital asset and not as ordinary and usual expenditures incurred in the conduct of a going business.

(1919)

This is an appeal from the determination of a deficiency in income taxes for the period from July 7, 1919, to December 31, 1919, inclusive, in the amount of \$7,280.56. In its petition, the taxpayer charges error on the part of the Commissioner in disallowing, as deductible expenses, \$23,191.76 alleged to have been paid for adding machines, \$16,100 alleged to have been for a lease of certain property, and \$30,000 said to have been paid in connection with the merging of several banks with the taxpayer. At the hearing of the appeal, counsel for the taxpayer stated that he was satisfied with the Commissioner's adjustment of items 1 and 2 and desired the Board simply to pass on the third question.

The taxpayer is a national bank, located in St. Louis, Missouri. It originated by the consolidation in 1919 of the old Third National Bank, the Mechanics American National Bank, and the St. Louis Union National Bank. Incident to the consolidation of the aforementioned banks, the sum of \$30,000 was spent by the taxpayer and charged on its books to expense. This amount was thereafter deducted in its income-tax returns for the period under consideration. Of this amount \$16,500 represented attorney's fees and \$13,500 represented sums paid to employees on account of overtime work required in transferring the assets of the three banks to the one.

Opinion

Arundell: Section 234 (a) (1) of the Revenue Act of 1918 provides that in computing net income there shall be allowed as deductions all

¹ 3 B.T.A. 807.

of the ordinary and necessary expenses paid or incurred during the taxable year in carrying on any trade or business. It is desired here to deduct, under this provision, the amounts expended in connection with the consolidation of the several banks mentioned in the findings of fact. Generally speaking, items to be deductible under this subdivision of the section must be those ordinary and usual expenditures incurred in the conduct of a going business. The fact that they may be unusual in amount or seldom recur can not deprive them of their inherent character as expense items. On the other hand, amounts expended for assets that are to continue in use in the business over several years are usually to be classified as capital items, and the sum paid therefor is recovered over the life of the asset, if it be of an exhaustible character. The transaction which called forth the expenditures here in question was presumably one which resulted in increasing and maintaining the earning power of the taxpayer, and thus throughout its corporate life the taxpayer will enjoy the fruits of these expenditures.

Some accounting authorities have urged as a matter of sound and conservative accounting that organization expenses, which are substantially similar to the items here in question, should be written off over a term of from 2 to 10 years, for the reason that such expenses, if capitalized, are represented by no salable assets. Much may be said for such a course as a sound business measure. However, as we have heretofore had occasion to remark, the income-tax laws are not always in accord with accounting practice.² We cannot escape the conclusion that the expenses in question are not those ordinary and necessary expenses permitted by the statute to be deducted.³ It must follow that the determination of the Commissioner is approved.

COMMENTARY: There are at least four possible methods of accounting for organization expenses: first, to write off such expenses as soon as they are incurred, as Montgomery advocates in his *Auditing Theory and Practice*, realizing that such writeoff is not allowable as an income tax deduction but is quite sound from the standpoint of a company's accounting policy; second, to capitalize such expenses temporarily, writing them off within two years; third, to capitalize such expenses and write them off over a longer period of time, in spite of the fact that this may be said to be an abusive practice; and last, to capitalize such expenses permanently.

The practice of writing off organization expenses immediately is obviously the most conservative practice and very well meets the objection that organization expenses have no resale value and therefore could hardly be classified as an asset under any circumstances. Whether the reasoning which leads one to this practice is logical or not, the fact remains that many concerns, especially banks, follow this method.

² *Appeal of Consolidated Asphalt Co.*, 1 B.T.A. 79.

³ *Appeal of F. Tinker & Sons Co.*, 1 B.T.A. 799.

Conservatism, on the whole, does not seem to be a sufficient justification for following such a practice, because in any case if the organization expenses are written off immediately and against the current year's profit, the profits for that year are greatly reduced and in some cases suffer the burden cost of a certain benefit which really carries over into several years in the future. From a profit standpoint, therefore, it would seem that the year of incurring the expense should not suffer the whole cost but only its proportionate share. This means that if the truth is to be shown, a sound prorating of the cost to the few years which benefit from the expenditure is absolutely indispensable, and conservatism of practice in no way should conflict with an adequate statement of the truth in so far as that may be possible. This practice, it is understood, is allowable for the determination of profits for the company's statements but in no case is allowable in the computation of profits for reporting income tax.

It can be argued that since no one knows whether the newly organized concern will make a profit or not or whether it will remain intact or not, it would be foolhardy to capitalize any of the organization expenses. But this argument, as can be seen, certainly cannot command much weight, since the same would be true in the case of all the fixed assets should there be a forced sale or should any other liquidating procedure take place. If the going concern concept is considered, organization expenses, if justified at all, are as indispensable as the expenditures made for new buildings, new machinery, and other equipment.

If the second practice is to be followed, namely, that of capitalizing the expenditure temporarily and writing it off in the first two years, there is at least a chance to observe what the concern is going to do from a profit standpoint, and, therefore, to ascertain if any profit is to be made and whether or not there is any justification for any of the expenditures. This, of course, is only a matter of hindsight and in no way solves the problem, because, regardless of whether the concern is profitable or non-profitable, the organization expenses must be eliminated or otherwise accounted for, since they have already been incurred. From the standpoint of a new concern and its stockholders, there is a better opportunity to present a favorable statement if several years are used to write off the organization expenses than if they are written off immediately; for, if the expenses involved in organizing a new concern are written off in the year in which they are incurred, a deficit may appear.

The third policy, which is that of capitalizing the expenditure and writing it off over a longer period of time than two years, tends to raise a highly different set of views. In Italy, for instance, where the life of a corporation is limited to fifty years, the law states directly

that organization expenses shall be prorated over the life of the charter of such corporation. This practice apparently is based upon the reasoning that the organization expenses are as indispensable as expenditures for plant and machinery, the only difference being that the plant and machinery may wear out because of use in a shorter period of time, whereas presumably the organization expenses will at least last the length of the corporate charter. In the United States, when organization expenses are capitalized, the question may be raised as to why these expenses should be written off so long as the corporation continues to exist. Unlike goodwill, organization expenses do not result from earnings, but, like machinery, represent an actual cash outlay. Good accounting practice advocates the depreciation of machinery, not according to profits made by a corporation, but rather according to the loss in value caused by use and the passage of time. The point to be decided in connection with writing off organization expenses, therefore, is whether they are subject to the depreciation or other deductions which affect machinery values. Organization expenses are not subject to such depreciation; therefore, it would seem, on the whole, that a middle course such as the third method can hardly be adopted; consequently, either the first or second, that is, writing off the expenditure immediately or capitalizing the amount and writing off the sum in two years, must be resorted to, or the full length must be travelled and the fourth method adopted, which is to capitalize the expenditures permanently.

From a strictly logical point of view, it seems that the fourth method has some merit, on the ground that an organization has no earning power or capacity until it is properly constructed and that the expenses incident to such construction are as much a part of the permanent investment as any of the fixed assets. So long as the corporation has life and remains intact, the organization expenses are as much a part of the fixed investment as the plant and machinery, regardless of whether the concern has been profitable or non-profitable. From a sound accounting point of view, if organization expenses were capitalized permanently and properly classified, no reader of a balance sheet would be greatly misled, because he could draw his own conclusions as to what value he might attach to the organization expense. So far as information is concerned, a reader of the balance sheet might attach great value to learning just how much it cost the individual corporation to become established, knowing at the date of reading the balance sheet all of the history that had transpired, and if safeguards were necessary, the company could easily provide for them by segregating a portion of surplus to offset the organization expense.

It can be seen from the above discussion that there are several points of view to be considered: first, the income tax view; second,

what might be termed accounting practice dictated by current business policy; and third, the logical view. The Board of Tax Appeals in the present case did not say how the First National Bank of St. Louis should account for its organization expense. It merely said that the bank could not deduct such expenses in the computation of profits for income tax reporting purposes. This ruling, although it conflicts with the first two methods, the second of which in particular is common practice, can be justified from the standpoint of the income tax department on the ground that the administrative difficulties involved in tax matters are so great that it is impossible to have many items treated at the option of the taxpayers. Consequently, to lay down an arbitrary rule regarding certain items, regardless of whether it conforms to current business practice or not, is the only possible working rule for the income tax department. On the other hand, if a company wished to conform to current practice, it would probably elect to use the second method, as most concerns have written off their organization expenses in as short a period as possible. This method has the advantage of being semiconservative and eliminates at an early date an asset which has no resale value. From the strictly logical point of view there certainly are reasons of considerable weight for permanently capitalizing organization expense, and the only reason that this practice might be frowned upon would seem to be that current practice in this country does not approve it.

July, 1929

P. B. C.

EGGLESTON FABRICS CORPORATION¹

MANUFACTURER—TEXTILES

ACCOUNTING—*Amortization of Alteration Costs for Leased Property.* A textile manufacturing company bore the expense of maintaining the office and showroom of its New York selling agent. In 1926, when the company signed a seven-year lease for a new office on which it made extensive alterations, the advisability of treating all or a part of the alterations as an asset was considered. The company decided to set up the alteration cost as a temporary asset and to write it off gradually as an expense, prorating the cost over the seven-year term of its lease.

(1926)

The Eggleston Fabrics Corporation, a textile manufacturing company having annual sales of approximately \$2,000,000, distributed about 90% of its output through a selling agent in New York City. Under its contract with this agent the company bore the expense of maintaining the New York office and showroom. In 1926 the lease on the quarters then occupied expired, and the company decided for various reasons not to renew it. Another office was selected and a lease was signed for a period of seven years. The new office was larger and more favorably located than the one previously occupied. In order to make it more suitable for the company's purposes, however, extensive alterations were necessary. Since the lessor was not willing to pay for those alterations, the Eggleston Fabrics Corporation was forced to make them at its own expense.

The total cost of the changes made amounted to nearly \$70,000, which was equivalent to approximately 35% of the company's net income for the year. Because of this high percentage, the advisability of treating either the whole or a part of the alterations as an asset came up for consideration. Writing off the entire cost as an expense of the year 1926 would have the effect of reducing the profits of the year to a point much lower than the normal annual profits. The management of the company believed that such a policy would handicap it somewhat and therefore it did

¹ Fictitious name.

not wish to charge off the entire amount as expense unless the facts required such a course.

Since the benefits to be derived from the alterations were not confined to the year 1926, it seemed to the management that at least a portion of the cost might properly be set up as an asset. The determination of the portion which should be capitalized raised several questions. The simplest method of handling the matter would be to regard the entire \$70,000 as a permanent addition to the company's fixed assets. The chief objection to such a method lay in the fact that the company did not own the property on which the alterations had been made, and that when it vacated the property at some future date these alterations could not be removed nor their value restored to the company.

An alternative plan would be to set up the cost as a temporary asset or a deferred charge, and to write it off gradually as an expense, distributing it over the years which would be benefited. The determination of the portion which should appear as an asset on any balance sheet and the portion which should appear on the operating statement of any year as an expense depended necessarily on the period over which the company would receive benefits from the expenditure. If it were certain that the lease would not be renewed and therefore that the company would not occupy the property longer than seven years, a reasonable method of writing off the alteration cost would undoubtedly be an equal annual apportionment over a seven-year period, resulting in an annual decrease in the asset value of \$10,000 and a corresponding charge to expenses. It was possible, however, that the term of occupancy might be extended by a renewal of the lease, in which case the benefits to be derived from the alterations would apply for a longer period than seven years. Under these circumstances it might be desirable to apportion the alteration cost according to the entire period of occupancy. The company had no basis on which to estimate the probability of such an extension of its term of occupancy.

On the other hand, since the company's contract with its selling agent had only two years to run, the benefits to be derived from the alterations might apply for less than seven years. While there was a reasonable expectation that this contract would be renewed, it was possible that new arrangements for the distribution of the company's product might be made. In that event the

office now occupied might be vacated and subleased to another tenant. In view of this possibility, it might be advisable to write off the cost of the alterations over a shorter period than seven years.

The company's decision was to prorate the cost of alterations over the seven-year term of the lease.

COMMENTARY: It would be unsound in the present case to treat the alteration costs of \$70,000 as a permanent addition to the fixed assets. From the facts of the case, the alterations were such that they could not be removed; this means that the asset value, if any, would accrue to the landlord, and not to the lessee. To set up the \$70,000 charge as an asset on the books of the Eggleston Fabrics Corporation would, to say the least, state an untruth, unless the rate of depreciation applied to that particular amount was large enough to write it off within the period of the lease. Even though such a depreciation rate were used, it does not seem that this method of handling the alteration costs would be sound.

Although the idea of charging the \$70,000 directly to Surplus apparently was not considered in this case, it might have been a possibility. If this method of disposing of the \$70,000 had been applied, the accumulated profits from past years would have been used to defray the expenses of alterations of the year 1926. This procedure would have been penalizing the past years with expenses with which those years had nothing to do and safeguarding the present and future years from bearing the expenses of alterations which they really brought on. If the surplus had been large and had been increasing, a charge of \$70,000 would, in dollar units, have affected it very little, in which case some might argue that charging the amount to Surplus would have been the most convenient method. If the surplus had been small and had been showing considerable decline in recent years, as has been the case with most New England textile companies, it is doubtful if the Eggleston Fabrics Corporation would have wished to reduce its Surplus account still more by penalizing it with such a charge.

Presumably, the most conservative method of accounting for the cost of alterations made on property occupied by a lessee on a short-term lease would be to treat the entire cost as an expense of the year in which the alterations were made. This method, however, would work an undue hardship on the particular year, since that year would bear the cost of improvements which would benefit subsequent years. Such a procedure would be as untruthful as, or, from a profit standpoint, more so than, the method discussed in the preceding paragraph. It would seem, therefore, that a reasonable attitude to take would have

been that of making each year that received any benefit from the alterations suffer a portion of their costs. The solution to the problem, then really rested upon the ascertainment of the number of years that would be benefited.

In this case it was not certain how many years would be benefited. The least, it would be fair to assume, would be two, at the end of which there was a possible chance that the selling agent would terminate his connection with the company. If this happened and the company could not find another agent to take over the showroom, the latter, by the facts presented, would probably have to be sublet. In that event, if the company had not arranged to charge off the total cost in two years, the balance not written off would have to be charged to Surplus as a capital loss. Since, however, very few things are absolutely certain, all one can do is to act according to reasonable expectations. In the present case, the company had every reasonable expectation of renewing the contract with its agent, so that the expenses, if temporarily capitalized, could be amortized over a longer period of time than two years.

Even if no complication had arisen from the selling agent aspect of the problem, there was still the factor that the improvements might not serve the company's purposes during the entire length of the lease, which was seven years. Although there is no definite statement that the company fully intended to get a benefit from the alterations for seven years, one can presume that to have been the case, for, otherwise, the company would not have been willing to spend so large a sum as \$70,000. Consequently, with no adverse considerations presented so far as the expenses are concerned, it would seem that seven years would be a fair basis.

On the other hand, the company might continue in the new office by renewing the lease, so that more than seven years might be benefited. Here, it would seem we must draw a line. In the first place, the Eggleston Fabrics Corporation had not renewed its old lease for a number of reasons. At the end of the coming seven years, there might be equally as many reasons why it would not renew the existing lease. Therefore, it seems that seven years is a long enough time about which to conjecture. Further than that, the chief purpose in capitalizing any of the expense was to refrain from unjustly penalizing any one year's income. If the expenses were distributed over seven years, no single year would bear a preponderant share of the burden. On that basis, each year would be sustaining a cost equivalent to only 5% of the profits, which would not be exorbitant or unfair, since each year would be receiving a benefit corresponding to the charge.

The conclusion having been reached that the seven-year period should be used as a basis to amortize the \$70,000 expense item, a final

question would arise as to the method of amortization. Should the expenses be distributed equally over the seven years, or should the expenses be charged according to each year's income? The surest method of eliminating the \$70,000 would be to use the straight-line method, charging each year with \$10,000. There was no sure way of forecasting how profitable any of the years would be. Further than that, the mere fact that one year was more profitable than another would not indicate that the additional profit was brought about by the alterations made. Therefore, no one year should stand any more of the cost of the alterations than any other year; from a sound accounting point of view, an equal annual charge would seem to be the best method of amortization.

To summarize, it might be stated that when alterations are made by a tenant on property leased on a short-term basis their cost may be charged to Surplus, although such practice is usually not preferred. A procedure which generally seems better is that of temporarily capitalizing and writing off such costs in equal amounts over the years of the lease, provided there is adequate reason to believe that the company will receive the benefits afforded by the alterations throughout the entire length of the lease. If, on the other hand, there is a likelihood that the alterations will not serve the company's purposes for the entire length of the lease, the company should make every effort to ascertain the number of years the improvements will serve its purposes, and then write off the charges capitalized over this number of years. The soundest method of amortizing the expenses is the straight-line method, for the assumption is that no one year will receive any more benefit than any other year from the alterations made. Therefore, no year in the lease period should stand any more of the charges than any other year. A company which did allow one or more years to assume a preponderant share of the charges, because those years proved to be more profitable than the others, would be adopting a more or less haphazard method of accounting for the costs of alterations. Unless it is certain that the lease will be renewed, a company should never consider capitalizing the alteration costs and writing the amount off over a longer period than the number of years covered by the first lease. At the other extreme, it seems equally unwise to charge off the entire cost of alterations in the year in which they are made, especially when the amount is so large as to reduce greatly the profits for that year.

May, 1928

P. B. C.

AMAZON PRODUCTS COMPANY¹

MANUFACTURER

ACCOUNTING ORGANIZATION—*Centralization in Company Operating Large Number of Manufacturing and Selling Units.* A company operating a large number of manufacturing plants and selling companies wished to centralize all accounting work of the company in its home office, believing that it was not necessary for each unit to maintain its separate identity and that standardization and uniformity of accounting were imperative. By emphasizing the fact that each plant was a part of one large organization, the vice president in charge of accounting had been able to induce most of the manufacturing plants to have their accounting done by the home office. The selling branches, however, refused to follow this policy; the branch managers contended that they could obtain the best results by operating the branches as separate businesses. Since he wished to avoid any organization difficulties, the vice president was uncertain whether he should attempt to effect complete centralization of the company's accounting.

The accounting work of the Amazon Products Company had become tremendous in size and complicated in operation because of the new companies that had been acquired from time to time. The company originally had been small, but, because of competition and because of the prevalent idea that one large corporation would prove more profitable than a number of small ones, it gradually had grown until it was one of the largest corporations in the United States. Units of two types had been acquired, including about 40 manufacturing plants and about 200 selling companies.

The home office of the company was in New York City. The vice president in charge of accounting had always been of the opinion that the accounting work should be centralized in the home office, on the ground that the units, once consolidated, all formed one large company and that there was no need for each company to continue to maintain its separate identity, either from an accounting or from any other point of view. In addition, the vice president believed that, with such a large number of divisions, standardization and uniformity of accounting were

¹ Fictitious name.

imperative, but that they could not be effected if each plant and branch was left to do its own accounting work in its own way.

At first it had been difficult to convince the manufacturing plants that they were a part of one large organization and that they could make a profit only when the company as a whole made a profit. By gradual education, however, this idea had become commonly accepted, and the various plants had acquiesced in their accounting work's being done in the home office. Nevertheless, questions arose from time to time as to the soundness of the policy of centralization of the accounting work. On these occasions one argument always was presented, namely, that if each plant did its own accounting work, the executive in charge of that plant would have a better control than he would have with centralization of accounting, and that he would have thereby a better chance to deal with any difficulties that might present themselves. On the other hand, the fact that the plant executives could never have complete control, because all financial measures and budget programs were dictated from the home office, meant that in any case the plant executives were limited in their initiative.

In the case of the selling branches, the vice president had been less successful in his policy of centralization; the branch managers refused to let the home office do their accounting work, contending that they could obtain the best results only by operating the branches as if these were their own businesses and by doing all the work connected therewith. The vice president replied that this argument had little validity, since the home office charged the branches with the stock they sold at a figure higher than cost and the percentage of mark-up was not known by the selling branches. If the profit of the latter became too large, the home office probably would increase the price at which it billed merchandise to the branches. Furthermore, whatever profit was made in the branches was taken over sooner or later by the home office in the form of dividends, so that no surplus ever could be accumulated on the books of the selling branches.

In view of these general accounting conditions, the vice president was in a quandary as to what action he should take, especially since he was anxious to avoid any organization difficulties. However, with the accounting work half centralized and half decentralized, his department was not working so

smoothly and consistently as he desired. Since he was responsible for the accounting work, he wanted to have it organized on a consistent and uniform basis.

COMMENTARY: Two questions are raised here: centralization, and uniformity, of accounting among a large number of units merged into one consolidation by inter-company relationship. Of these, uniformity was much the more urgent; it is difficult to see how the comptroller could prepare his consolidated statements unless the statements of the separate units were made up with the same items in each, and with some assurance that any one item meant the same thing in all the statements. Moreover, in view of the fact that many independent companies in the same industry have been induced by trade association activities to adopt the same accounting plan in the interests of uniformity, there would seem to be no valid reason why different subsidiaries of the same parent company may not do so, too.

Centralization of the accounting, on the other hand—its removal from the local units to the head office—was a more far-reaching affair, since that involved taking the accounting out of the hands of the individual company officials, who were likely to resent an interference with what they regarded as their legitimate authority. In many cases the officers of the parent company would be unwilling to apply coercion to the type of man who was able enough to administer one of its subsidiaries effectively, thus leaving the general comptroller under the necessity of using what moral suasion he could bring to bear to gain his ends. It is understandable, also, that the sales branches were less amenable to this sort of pressure than the manufacturing units were; it is easier to convince a production man than a selling man that his efforts alone do not make profit for the company, when it is the general doctrine that the selling act consummates the profit. Moreover, it was necessary to accord to the managers of sales units a great deal of liberty in adapting themselves to local conditions in regard to prices, allowances, and special deals, and liberty in accounting was a natural consequence.

Uniformity in accounting was of sufficient importance to deserve the support of the general executives, but probably they could accomplish just as much by gradual education as by sudden compulsion.

March, 1929

T. H. S.

DEEPHAVEN PIANO COMPANY¹

MANUFACTURER—PIANOS

STORES CONTROL—*Method of Requisitioning Material.* A company manufacturing high-grade pianos maintained a lumber yard where the wood used in its products was dried and seasoned before being manufactured into parts. Pianos usually were manufactured for stock in lots of 24, and the wood required for all the parts of the cases in one lot was requisitioned at one time. Because of increasing lumber costs and the need for more complete material records and control than it was using, the company decided to establish a stock room in the mill for storing the parts used in making piano cases and to install a complete stores record for accounting for all parts entering and leaving the stock room. Orders for sawing any parts required for a lot of cases or for the replenishment of stock were to be issued by the storekeeper after he had consulted the stores ledger cards.

QUALITY CONTROL—*Record Used to Obtain Uniform Grading of Materials.* A company manufacturing high-grade pianos knew that grading of lumber varied between the firms from which it was purchased, and that the grading standards of the same firm fluctuated from time to time, with the result that not all lumber of a specified grade was of the same quality. In order to check the quality and waste from sawing of all the lumber it purchased, the company adopted a form on which to record the results obtained from each lot of lumber, identified as to its grade and origin. By means of this form the company was able to show dealers that different lots of lumber purchased from them, supposedly of the same grade, had not yielded similar results when sawed. As a result, the company obtained more consistent grading of lumber from those dealers.
(1927-1929)

In 1927, because of increasing lumber costs and the need for more complete material records and control than it was using, the management of the Deephaven Piano Company decided to revise its system of requisitioning the wood required for the parts of piano cases.

During the 100 years since its establishment, the Deephaven Piano Company had manufactured pianos embodying a high quality of workmanship. Its pianos, along with those of three

¹ Fictitious name.

other companies, were regarded as the best instruments in the field. Ninety per cent of the pianos made by the Deephaven Piano Company were of the grand type and 10% were upright. Thirty-four standard models, including four reproducing piano models and three period models, were made for stock; the mechanisms for the reproducing pianos were manufactured by a subsidiary company. The reproducing pianos were made to retail at prices ranging from \$2,900 to \$4,000, the grand pianos at prices from \$1,300 to \$2,500, while the upright models were sold at lower prices. The company, with a labor force of about 400 men, produced approximately 2,000 pianos annually.

The factory was divided into two groups of departments, the first group containing all the departments which manufactured portions of the piano cases, and the other group the departments which made the action parts. Because it was the company's policy to produce pianos of the highest quality possible, most of the work was done by hand, and the average length of time required to produce a complete piano was six months. It was the usual practice of the trade to manufacture pianos for stock in lots of 24, except in periods of dull business, when it was attempted to have a smaller number in each lot, but not less than 12. Special orders for one or more pianos were routed through the factory separately.

The company maintained a lumber yard at its plant, where the wood used in its products was dried and seasoned for at least nine months before being put into the manufacturing processes. Until 1927, the wood required for the piano cases was requisitioned for each lot separately; sufficient wood was requisitioned from the yard at one time to make all the parts of the cases in one lot. Although the best grade of lumber was purchased, an average of 40% of each lot requisitioned had to be thrown away because of the cutting out of knots and other imperfections. Small pieces of wood which could have been cut into parts for other models of pianos were thrown away with the unusable pieces and burned under the factory boilers.

In accounting for the material cost of a group of pianos, the total cost of the lumber from which the parts were made, regardless of the amount of wood burned, was charged to the lot; no charge was made to the fuel account and no credit to the lumber account. The sawyers were relied upon to use the wood delivered to them

from the yard to the best possible advantage, and no other attempt was made to control the amount of waste.

In 1927, the management decided to establish a stock room in the mill for storing parts to be used in making piano cases and to install a complete stores record to be used in accounting for all parts entering and leaving the stock room. Approximately two months' supply of the main case parts, such as leg columns, fall boards, and parts for the rim, was to be kept on hand. When it became necessary to order more parts, a number sufficient for a standard lot of 24 was to be requisitioned.

Under the new system, a production order for each lot of stock models was sent to the mill stock room, and a copy of the order also was given to the sawyers. From standard bills of material it was possible to determine the number of wood parts required for the cases in each lot of 24 pianos. The storekeeper, after checking the stores ledger cards kept in the stock room, issued an order for sawing any parts required for the order or for the replenishment of stock and authorized the yard to issue the lumber. The sawyers, adequately supervised, were required to cut as economically as possible the kind and number of parts specified, and, whenever possible, to utilize odd pieces of wood left over by making any parts which could be used on other models. From their lists of standard parts and their general knowledge of what parts could be used in the factory, the sawyers were able to use some material which under the old plan was thrown aside and burned. All pieces sawed, whether requisitioned or not, were sent to the mill stock room and their cost was entered on the inventory records. As the various manufacturing departments required wood, they drew the parts from the stock room.

To determine the cost of parts, the method used previously was continued. A record was kept of the number of board feet of lumber requisitioned to make each lot, and the number of board feet in each part cut was computed; from the last calculation was obtained the total number of board feet in the pieces made. The percentage of waste was figured from the total and allotted to each separate part in the proportion that the net amount of material contained in each piece bore to the total material in all the parts made. The cost of the original material used was then divided among the parts on this basis. Storage costs and interest on investment during the seasoning period of the lumber

were not included in the material cost; the management preferred to regard such costs as overhead expense. Direct labor costs of sawing parts were charged direct to jobs on a time basis. When parts were issued to the productive departments, they were charged to jobs at average costs as determined from the stores records.

Small pieces of wood measuring only several inches in length and width were not entered upon the stores inventory records, as the cost was negligible. These parts generally were cut from scrapped pieces and were used for decorative effects on the cases, either as cut, or carved with designs. The company's attitude was that since the actual material content of these parts was small and since the company sold finished pianos only and no parts, it was inexpedient to attempt to place a material cost on them. Through the establishment of the intermediate storeroom, the company reduced the waste percentage to an average of 30% for all lumber, although in the sawing of sounding boards, which required perfect straight-grained lumber, waste averaged 65%.

The new method of entering materials did not give the company all the information it desired. It had known for many years that grading of lumber varied according to the firms from which it purchased its lumber stocks, and that the grading standards of the same firm fluctuated from time to time. Consequently, the Deephaven Piano Company never was sure that a carload of a specified grade of lumber ordered at one time would be the same as one ordered from the same dealer at another time. The company desired a record to enable it to check the quality, and waste from sawing, of all the lumber it purchased. It also desired a record whereby it could determine statistically the best grade of lumber to be used for certain parts, although it knew from experience which kinds of wood were best for particular purposes. With these objectives in mind the company drew up the form shown in Exhibit 1, and put it into use in 1929.

The upper section of the form showed the amount of material requisitioned from the yard to be used for definite orders. All lumber in the yard could be identified as to grade and origin, and this information was entered with the purchase price per thousand feet. The middle section on the left-hand side of the form showed the net amount of lumber in the pieces cut from the quantity taken from the yard. At the bottom of the form was an analysis

LUMBER TO MILL FROM YARD

Amount	Size 6 X 4	Wood Mahogany	Grade No. 1	R. R. Car No. NYC 64839	Bought from Jones and Jones	Price \$198				
RECORD OF CUTTINGS (MILL DEPT.)				DISTRIBUTION OF CHARGE (COST DEPT.)						
Quan. Cut	Description	Style	Order No.	Cutting Length & Width	Plane Thick	Net Cutting Feet	Per Cent of Total	Board Feet Cut	Price Amount	Order No.
40	Case Mouldings.....	156	246	9 X 7/16	1 1/4	10	32.3	25.8	\$198	246
40	Case Mouldings.....	156B	263	9 X 7/16	1 1/4	10	32.3	25.8	198	263
42	Case Mouldings.....	159	287	9 X 7/16	1 1/4	11	35.4	28.4	198	287
					Total	31	100.0	80.0		
Summary				Board Feet		%				
Total amount rec'd from yard.....				80		100				
Returned to yard (deduct).....						38.75				
Balance charged to orders.....				80		61.25				
Net cutting feet (deduct).....				31						
Waste.....				49						

Exhibit 1: Form used by Deephaven Piano Company in checking quality of materials.

of the lumber taken, showing the waste resulting. The cost department completed the middle section on the right-hand side of the form. The ratio of each item in the "Net Cutting Feet" column to the total of that column, applied to the total lumber taken from the yard, gave the number of board feet of lumber, including waste, to be charged to the various parts. The last column headed "Order No." was the folio column used to post the material costs to the lot cost cards.

During the first six months of use of the new form, the company was able to show several dealers that different lots of lumber purchased from them, supposedly of the same grade, had not yielded similar results when sawed. As a result the company began to receive from those dealers lumber graded more consistently. Another result obtained was that the company found it possible to buy cheaper grades of lumber for certain purposes than formerly had been used and yet retain the high quality of its products. The waste records showed that in some instances it was more economical to use second-grade lumber costing about one-half as much as first-grade lumber because the waste from the cheaper grade was not twice as much as on the higher-price grade. As it continued the use of this form, the company hoped to be able to obtain more reliable data concerning waste from different kinds of wood.

The company contemplated the installation of a system of standard costs in its plant. Another piano company which manufactured pianos of a lower quality had installed a complete system of standard costs for material, labor, and overhead expense, which appeared to work satisfactorily, and the Deephaven Piano Company wished to study the feasibility of adopting a similar system. It expected that data compiled from the new form would give sufficient information to enable it to establish standard costs for materials for piano cases, and that eventually it would be able to extend a system of standard costs to include all the elements of the cost of manufacturing its products.

COMMENTARY: The case exemplifies the frequency with which changes in or additions to records are an incident in changes in the physical handling or processing of materials. The establishment of an intermediate stores room of piano parts necessitated a record to control those stores, as otherwise manufacturing orders for pianos would find a shortage of parts in stock, and parts would be cut direct for orders

for complete pianos, the very thing the change was designed to obviate. It is easy to see how orders to cut specific parts might be carried out more economically than general orders to cut all the parts for a number of complete pianos; a saving of 10% in lumber used would be a reasonable result of the change, and an ample repayment for the slight extra clerical work of keeping the stores inventory of parts.

There was no change in the method of figuring the cost of parts; the pro-rating of the gross amount of lumber cut over the different parts cut in proportion to the net lumber content of the finished parts was rational; no exception could be taken to it, unless the cutting of a given part regularly involved more waste than other parts. The principal purpose of the form given was, therefore, to identify specific purchases of lumber at the time of cutting them up, and the advantages of the form were realized when it became possible to acquire more uniformly graded lumber, by being able to show lumber dealers the actual cutting records on supplies previously purchased.

If a standard cost system were put into effect, there is no doubt that the new method of handling and accounting for parts would fit in better than the old method.

March, 1929

T. H. S.

DRUGGISTS' SUPPLY COMPANY¹

MANUFACTURER—DRUGGISTS' SUPPLIES

INVENTORY CONTROL—*Use of Perpetual Inventory System.* When a company which manufactured all types of druggists' supplies organized a cost accounting department, it decided to adopt a system of perpetual inventories for all raw and semimanufactured materials, as well as for finished stock. By the use of inventory sheets in the storeroom, a perpetual balance of inventory, together with the value of the balance and its average unit cost, was maintained for each item. These records aided the purchasing department in placing its orders so as to maintain the proper amounts of materials on hand. The balance-of-stores records were used also in estimating inventories when the books were closed each month. Complete physical inventories were taken but twice a year, and showed little variation from the book figures.

The Druggists' Supply Company operated a factory for the production of all types of supplies for retail drug stores. Patent medicines, tablets, lotions, perfumes, toilet preparations, and confectionery were included in the company's output. When a cost accounting department was organized, the cost accountant suggested that a complete system of perpetual inventories should be used in the factory for all raw and semimanufactured materials, as well as for finished stock, in order that there might be available at all times accurate records of the quantity and value of materials on hand. These records would facilitate the accurate estimating of inventories. Each storekeeper would be required to maintain accurate balance-of-stores sheets; the data secured would be useful to the purchasing department and would form an essential part of the cost accounting system.

It was desired to close the company's books each month. If perpetual inventories were kept, it would not be necessary to take a final count of all materials in the factory each month; thus the company would secure a saving in labor which would be more than sufficient to pay for the clerical cost of maintaining the stores sheets. It also would be possible to draw up financial statements for the entire factory at any time. Losses in inventory would be

¹ Fictitious name.

eliminated almost entirely, because the responsibility could be placed definitely on the storekeepers. The elimination of uncertainty as to the quantity and value of materials on hand was considered an important factor in good management.

The officials of the company decided to accept the perpetual inventory plan because of the benefits to be derived from accurate control of inventories, from purchasing data and cost figures, and from the ability to include in the general financial records of the company the values of the merchandise as shown on the inventory sheets.

There were five main production departments in the factory, over each of which a general ledger control was kept. For the purpose of inventory control, under the new plan adopted, each department account was subdivided under three broad headings. The first division, Raw Materials, showed in detail the various classes of raw materials received, such as chemicals, containers, and literature, the latter consisting of labels, direction sheets, and leaflets. The second division was for Partly Finished Goods or Compounds, containing such merchandise as pharmaceuticals, patent medicines, tablets, and dry powders. In this classification were included products which were made up in large quantities by the manufacturing departments and kept in bulk until needed for distribution to finished stock. When the latter distribution was made, the partly finished goods or compounds were put into containers, such as boxes, bottles, flasks, and wrappers. Thus the account for partly finished goods actually represented an intermediate storage between goods in process and finished goods ready for sale. The third heading was Production Centers. For the purpose of inventory control and overhead distribution the production departments were divided into a number of centers, each of which made products of the same nature. For example, in department Number 1 there were production centers known as 1A, 1B, and 1C. All products manufactured in each production center were sufficiently similar in nature to allow for ready distribution of production expense.

When partly finished goods or compounds were delivered from a production center to the partly finished stock room, labor and overhead charges were included with the material charges at predetermined standard rates per unit, so that raw materials going into the production center were charged out at a figure covering

the material cost plus standard charges for labor and overhead. Finished goods delivered to the finished stock room had accumulated labor and overhead charges in each of the divisions through which they had passed. Thus the production department was charged with all the expenses involved in the finished product, not merely with the cost of materials.

The company used more than 20,000 kinds of raw materials, all of which were kept in one storeroom. A perpetual inventory sheet, with the headings, Ordered, Received, Requirements Withdrawn, and Value, was kept for each kind of material. Under the first four headings were spaces for the date, the order or requisition number, and the quantity. In the column for Value, the actual value of the materials on hand and the average cost per unit were entered. By the use of these sheets, for every item a perpetual balance of inventory was maintained, together with the value of the balance on hand.

Inventory sheets were kept in the various departments, as well as in the storeroom. Much of the raw material could not be used in the manufacturing departments without being compounded according to formulas. In such cases, bulk amounts of the compound were made up in the storeroom and distributed to the departments in carefully measured containers. This action occurred in all cases where it was advisable to have on hand in the various departments standard compounds which could be kept without risk of deterioration or spoilage. When such a compound was received by a department, it was entered on a perpetual inventory sheet in the same manner as though it had been a raw material received from outside; actually, however, it was charged to the department only as used.

By means of the balances shown on the stores inventory sheets, the purchasing department was able to place orders so as to maintain the proper amounts of each kind of raw material. When goods were delivered, they were put in the storeroom and entered under the Received column on the inventory sheet. After being checked as to amount and quality of materials received, the invoice was sent to the accounting department, where additional entries were made on it for the guidance of the storekeeper. On the back of the invoice were entered the last balance on hand and the average cost up to the new purchase. The value of the new merchandise and the total value of the previous balance were

added; the quantity received was added to the former balance on hand; and a new average cost was computed for the new inventory balance. The invoice then was returned to the storekeeper, who recorded the new average cost on his inventory sheet.

The books of the company were closed completely each month. In estimating the inventory of raw materials on hand and of goods in process, only the balance-of-stores records were used; no attempt was made at the monthly closing to take a physical inventory. Complete physical inventories were taken twice a year. Few errors were disclosed by the physical inventory. After the perpetual inventory plan had been in operation for some time, it was found that over a period of years the percentage of error between the physical inventory and the book inventory had been about $\frac{1}{2}$ of 1%. The average monthly inventory of the entire factory during that time had been between \$2,000,000 and \$2,500,000. The nature of the raw materials and of the manufacturing processes aided in maintaining the book inventory within this narrow deviation from the physical inventory. It was essential that nearly all the raw materials used be weighed or measured accurately before being sent from the storeroom to a production department. The liquids were measured by means of containers, and the solid materials were checked by weight or by unit with such care as to permit practically no errors.

Factory orders were made out according to definite schedules which provided for producing and distributing regular amounts of each of the supplies manufactured. The orders were drawn up on sheets which could be separated into three sections. One section specified the name of the finished product, the quantity to be produced, the formulas, and any necessary special instructions.

When detached, the second section became a requisition for raw materials from stores. When the storekeeper filled this requisition, he noted from it the department and subdivision to which the materials were issued, and marked on it the average cost per unit as shown by this inventory sheet.

The third section became a requisition for such standard compounds as were needed. Here again the storekeeper noted on the requisition the amount and average cost per unit of the materials supplied. From both types of requisition the storekeepers were able to show on their inventory sheets the exact description and quantity of the materials delivered.

In each department, all the requisitions so filled during one day were assembled according to the departmental subdivisions, 1A, 1B, 1C, and so forth, to which the materials were delivered. The total value of these requisitions was entered daily on cards used only for that purpose. At the end of each month, a total value of the raw materials issued to each subdivision during that period was secured from the daily cards.

In addition to the controlling accounts for each production department in the general ledger of the company, there were auxiliary departmental ledgers which in turn controlled each departmental subdivision. At the end of each month, the total value of materials requisitioned, as secured from the daily cost cards of a departmental subdivision, indicated the amount of raw materials delivered to that subdivision. A total for the entire department was obtained by adding the values of materials delivered to each subdivision. By adding the figures for deliveries made to all departments, a total of materials delivered to all the production departments of the factory was obtained. These deliveries were considered as purchases in each department, and since the inventory at the beginning of the month and the amount of finished product made during the month were known, a total inventory for each department was made available for the proper closing of the company's books. When each departmental ledger was being closed, all other items of expense were included and the necessary figures were then available for debiting the controlling account in the general ledger with total expenses of production in each department and for crediting the controlling account with total value of finished goods delivered to the finished stock account.

COMMENTARY: The nature of the products and operations of the Druggists' Supply Company required that extreme care and accuracy be exercised in all manufacturing operations and in the handling of materials. The requisitions for raw materials to be put into process were analogous to the filling of a physician's prescription; any variation therefrom would militate against the results aimed at and might indeed be attended by serious consequences. It is, therefore, not surprising that book inventories of raw materials, and work in process should have been kept down to a variation of $\frac{1}{2}$ of 1% of error from actual inventories. This result was also probably helped, when the book inventories were first used, by the constant checking of actual

quantities against the book records; by checking a number of items each day the entire inventory could be reviewed several times within the year. Later a physical inventory twice a year was found to be sufficient. The same degree of accuracy could probably not be hoped for where large quantities of cheap materials were more roughly handled, but there would be no excuse for the Druggists' Supply Company's letting the inventory situation get out of hand.

There seems to have been some duplication in the keeping of stock records; possibly this was necessary duplication, required for the degree of accuracy above mentioned. One would, however, like to know a little more precisely the relationship between the different stock records and the precise contents and uses of each. We are told that "inventory sheets were kept in the storeroom and also in the various departments." This was probably not a duplication; in each department a record was kept of the supplies in that department. It is then stated, however, that the accounting department, after checking invoices, added on the back "the last balance on hand and the average cost up to the new purchase," with additional information concerning the inventory. This would suggest that the accounting department had at any rate an abbreviated form of inventory record; otherwise it would not be able to furnish this information.

March, 1929

T. H. S.

SOUTHERN STATES TEXTILE CORPORATION¹

MANUFACTURER—TEXTILES

PRODUCTION CONTROL—*Constructing Indexes of Machine Utilization.* In a company operating five textile mills, a new statistician found that there were available machine utilization figures showing, by departments, the ratio of the number of hours during which a machine actually was operated to the number of hours during which the machine would have been operated if it had been in continuous production. Believing that these figures furnished a measure of value to the company's executives in checking mill operation, the statistician decided to use the figures in constructing indexes of machine utilization for each group of similar operating departments in the mills, for each mill, and for the mills as a whole.

PRODUCTION MEASUREMENT—INDEXES—*Bases for Weighting Departments in Constructing Indexes of Machine Utilization.* A textile manufacturing company, in combining figures for machine utilization in each of the departments in its five mills into indexes of machine utilization for each group of departments, for each mill, and for the mills as a whole, considered the following factors as bases for weighting the relative economic importance of the departments: value of machines; physical volume of production; square feet of floor space used; power consumed; active machine hours; number of persons on pay roll; and amount of pay roll. For the preparing and spinning groups of departments the statistician selected machine hours as the basis of weighting; and for a miscellaneous group of departments, in which the relative importance of the individual machines differed materially, he selected the amount of pay roll as a base. In combining the group indexes into an index for all the mills, the statistician used the amount of pay roll as a weight; and in calculating an index for each mill, the mill weight for each department was calculated as the product of the department weight by the weight of the group.

(1926)

The five mills of the Southern States Textile Corporation, which produced textile yarns and fabrics, were located in a single town in one of the southern states. Although no one mill manufactured all types or qualities of the products sold by the company, each mill was independent of the others in management and in the processes performed. The preparing processes were essentially

¹ Fictitious name.

similar in all the mills, because each mill started with raw material. The important differences were in the finishing processes, where the yarns were treated in different ways to obtain the several qualities of finished yarns or fabrics. In some of the mills there were more steps or processes than in others, since the number and kinds of processes varied with the types and qualities of the products.

In 1925 the company employed a statistician, a portion of whose work was to establish methods of internal statistical control. The statistician found that among the operating reports which for many years had been filed with the central office as a matter of record, there were figures which showed by departments the percentage use of the various machines. These percentages, which had been calculated by the efficiency department, were defined as the ratio of the number of hours during which a machine actually was operated to the number of hours during which the machine would have been operated if it had been in continuous production. This ratio was written as a percentage and was a measure of machine utilization. This method of calculating the machine utilization made it independent of variations in the number of hours in the working day or week. The figure thus measured the percentage of machine utilization for the period during which the machine was supposed to be operating continuously.

The statistician studied the figures showing the machine utilization because he believed that they furnished a measure which would be of value to the company's executives in checking the operation of the mills. Since in the calculation of the theoretically perfect or potentially continuous operation an allowance was made only for the time ordinarily required to replenish a machine with new material, the figures, which were always less than 100%, showed directly the losses in time from such causes as breakages arising through defective machines or poor materials, too many green employees, or resetting of the machines for new qualities of product. A drop in the machine utilization figures for any department thus indicated a drop in efficiency arising from one or more of such causes. The statistician found that it was almost impossible to obtain from the separate figures for the many departments a complete picture of the machine utilization for a group of similar departments, for a particular mill, or for the

mills as a whole. A summary picture of this sort, however, was imperative if the figures for machine utilization were to be of value to the executives. In order to prepare the figures in such a form that they would present a clear-cut picture of this phase of mill performance, in 1926 the statistician decided to construct an index of machine utilization.

The units used in calculating the machine utilization were "clock counts," weight of goods produced, and linear yards of woven material. In some departments a counter was attached to each machine, which showed the number of machine cycles for the time during which the machine was in operation. These counters were termed "clocks." The machine cycles, or clock counts, corresponded to the time during which the machine was in operation. When the machine utilization for a department was measured in these clock counts, the percentages expressed the number of actual clock counts as related to the number of potential clock counts. In other departments where it was the custom to weigh the actual production of the machines, the figures expressed the weight of actual production as a percentage of weight of possible production. When production was measured in yards, as in the case of the weaving departments, the figures expressed the linear yards of actual production as related to the linear yards of potential production.

Since the measurement units were independent of losses in machine utilization caused by breakage, green employees, or lack of replacement material, no difficulty in the calculation of the percentage of machine utilization occurred from these causes. There were, however, from time to time, changes in the setting of at least some of the machines within a department, in order to produce different qualities of goods. Although such changes in the qualities of products within any particular department affected the units used in measuring both the actual and potential time of operation, no difficulty was created. In the spinning departments, for instance, the speed of the machines was adjusted to the weight of the yarn produced. If there was a change in the weight of the yarn produced by a group of machines, there was necessarily a shift in actual clock counts, as well as a corresponding one in potential clock counts. The ratio of machine utilization, consequently, would be the sum of the actual clock counts divided by the sum of the potential clock counts for the two qualities of yarn.

Since no allowance was made for the time taken to reset the machine, potential clock counts were included for this time, so that delays caused by changes in the setting of the machine for runs of different qualities resulted in a lower figure for the machine utilization.

In combining the departmental figures for machine utilization, the statistician was confronted with the difficulty presented by the great variety of work performed by the various departments. In studying the problem, he saw that a number of the departments could be combined into groups performing similar types of work. Thus, the opening and preparing departments performed one type of work, while the spinning departments performed another. The remaining departments, comprising the weaving, twisting, finishing, and some other departments, were included in a third or miscellaneous group.

The preparing group of operating departments included such departments as those which performed the carding or the roving processes. Machines of these departments were all of a heavy type which required considerable amounts of labor in comparison with the more nearly automatic finishing machines. In addition, each of these preparing machines provided material sufficient for a number of the finishing machines. Conditions were so similar in these departments that in effect they constituted a homogeneous group. The spinning departments also were a homogeneous group, since the variations among them were only in the qualities of yarn produced. The third group was heterogeneous, as there was little in common in the manufacturing processes of its several departments. As there seemed no way of classifying these latter processes into homogeneous groups, it was necessary to treat each department within this group as if it were a separate and distinct class.

The first indexes constructed were those for each of these operating groups. In constructing these indexes, the statistician believed that he was taking the first step toward his objective by reducing the numerous departmental figures to index numbers for groups of departments.

Since the various departments in any one of these groups were not of equal economic importance to the company, it would have been unsatisfactory to combine the figures without first weighting them. A satisfactory system of weights for the departmental

figures would express the relative economic operating importance of the several departments to the company. In selecting a system of weights for each of these groups of operating departments, the statistician considered the following bases of relative importance:

1. Value of machines
2. Physical volume of production
3. Square feet of floor space used
4. Power consumed
5. Active machine hours
6. Number of persons on pay roll
7. Amount of pay roll

From some points of view the value of machines would reflect the economic importance mentioned above. The money value invested would appear directly in this method of weighting; furthermore, those departments equipped with older and more inefficient machinery, which had been depreciated heavily, would receive smaller weights.

The physical volume of production would reflect directly the relative amounts of production, but not their values, of each of the several departments. On the other hand, the volume of production would not indicate in a satisfactory manner the relative money values of the machinery in the various departments.

To some extent the square feet of floor space used would reflect, through the size of the department, its economic value to the company. On the other hand, the amount of floor space used was influenced directly by the efficiency of the layout of the machinery in the case of departments doing similar types of work. If departments were doing different types of work, the relative amounts of floor space used might be quite different as far as the production values of the two departments to the company were concerned.

Power consumed would reflect directly the amount of work done by the machines in any department. If two departments performed similar types of work, the amount of power consumed would reflect directly the number of machines in use and the extent to which they were used. In addition, as among unlike departments, the heavier preparing machines would consume more power than the lighter finishing machines.

For the departments performing the same type of work, such as the spinning departments, active machine hours seemed to furnish a satisfactory basis of weights. The adoption of this basis would imply that the economic importance of each machine was equal to that of every other machine. This assumption, however, was not true even within the operating groups of the spinning departments, whose processes were practically identical. If this could be assumed as approximately true, the active machine hours would reflect the value added to the product. This basis, however, could not be used in weighting the combination of spinning machines and weaving machines, because these differed both in value and in character of product.

At first glance, the number of persons on the pay roll should be expected to reflect the economic importance of the various departments to the company. In common with other textile mills, however, the Southern States Textile Corporation in times of slack work closed down some departments, while other departments were operated on full time, with the labor force taking turns on part time on the active machinery.

The amount of the department pay rolls reflected, but did not measure, the value added in manufacture. Because each heavy preparing machine required more attendant labor than a finishing machine, the larger capital investment of the former would be reflected to some extent in the pay roll. Furthermore, the amount of the pay roll would show in some degree the importance of the products to the company.

In combining the departmental figures for machine utilization into indexes for the preparing group and the spinning group, the statistician selected machine hours for his system of weights. In making this selection, he assumed that the economic importance of the various machines within each group was approximately equal, so that the machine hours reflected directly the variations in contributions to the product among the various departments included in each of the two indexes. In the construction of the index for the third or miscellaneous group of departments, active machine hours were not satisfactory, because the economic importance of the machines in the several departments differed materially. The statistician selected, therefore, the amount of pay roll as the basis of weighting in these departments. The variations in the different bases of weights are shown in Exhibit 1.

For convenience, the figures are given for the five mills instead of for the three operating groups or for the large number of individual departments.

EXHIBIT 1

COMPARISON OF VARIOUS BASES OF WEIGHTING MACHINE UTILIZATION
FIGURES IN SOUTHERN STATES TEXTILE CORPORATION

(1924 Data)

	Mill A (a)	Mill B (b)	Mill C (c)	Mill D (d)	Mill E (e)	Total (f)
Value of Machines (1,000 Dollars).....	490 16.6 %	513 17.4 %	1,006 34.2 %	239 8.1 %	698 23.7 %	2,946 100.0 %
Physical Volume of Production (1,000 Pounds).. <td>11,377 16.4 %</td> <td>12,165 17.6 %</td> <td>30,060 43.5 %</td> <td>7,214 10.4 %</td> <td>8,352 12.1 %</td> <td>69,168 100.0 %</td>	11,377 16.4 %	12,165 17.6 %	30,060 43.5 %	7,214 10.4 %	8,352 12.1 %	69,168 100.0 %
Floor Space Used (1,000 Square Feet).....	106 13.8 %	175 22.9 %	335 43.8 %	49 6.4 %	100 13.1 %	765 100.0 %
Power Consumed (1,000 Kw.-hr.).....	124 9.5 %	293 22.4 %	529 40.5 %	122 9.4 %	238 18.2 %	1,306 100.0 %
Machine Hours (1,000 Hours).....	13,355 17.6 %	13,848 18.3 %	31,753 41.8 %	1,042 1.4 %	15,882 20.9 %	75,880 100.0 %
Number of Persons on Pay Roll.....	439 15.6 %	588 21.0 %	995 35.5 %	210 7.5 %	573 20.4 %	2,805 100.0 %
Amount of Pay Roll (1,000 Dollars).....	291 13.2 %	448 20.3 %	840 38.1 %	178 8.1 %	448 20.3 %	2,205 100.0 %

Exhibit 2 shows the index of machine utilization as calculated for the group of preparing departments. The machine hour weight for each department was calculated from the average

EXHIBIT 2

INDEX OF MACHINE UTILIZATION FOR PREPARING GROUP OF SOUTHERN
STATES TEXTILE CORPORATION, 1925

Depart- ment (a)	Clock Count (Unit 1,000) (b)	Weight (c)	DEPARTMENT INDEXES			GROUP INDEXES		
			Jan. (d)	Feb. (e)	Mar. (f)	Jan. (c × d) (g)	Feb. (c × e) (h)	Mar. (c × f) (i)
2	1,000	1.5 %	83.3	93.3	80.6	1.25	1.40	1.21
16	3,807	5.9	77.0	85.6	83.2	4.54	5.05	4.91
18	6,866	10.6	83.7	92.2	87.9	8.87	9.77	9.32
32	17,685	27.3	80.4	87.1	83.2	21.95	23.78	22.71
35	5,985	9.2	81.0	88.8	83.2	7.45	8.17	7.65
36	10,821	16.7	77.4	85.9	81.4	12.93	14.35	13.59
51	4,679	7.2	71.8	82.6	72.9	5.17	5.95	5.25
71	3,996	6.2	84.5	89.0	84.5	5.24	5.52	5.24
73	9,963	15.4	74.3	78.2	77.3	11.44	12.04	11.90
	64,802	100.0				78.84	86.03	81.78

clock counts for 1924, and was expressed as a percentage of the machine hours for all the preparing departments. Thus, the weight for Department 16 (Exhibit 2, column b), was $3,807/64,802$, or 5.9%. These weights were applied to the indexes for the various departments to form the products shown in columns g, h, and i. The sum of the weighted departmental figures for each month yielded the group index for that month.

The indexes for the spinning and the miscellaneous groups of departments were calculated in a similar manner, except that the weights for the miscellaneous group were obtained from the amounts of the department pay rolls instead of from machine hours.

After the index numbers for the various operating groups were calculated, the group indexes were combined to obtain an index for all the mills. Since the operating groups were dissimilar in types of work performed, the amount of pay roll was selected as the best measure of the relationship in respect to the economic significance of these groups. The weights were obtained from Exhibit 3 (repeated in Exhibit 4, column d) and were applied to the group index numbers of Exhibit 2 (as shown in Exhibit 4,

EXHIBIT 3

AMOUNT OF PAY ROLL BY OPERATING GROUPS OF SOUTHERN STATES
TEXTILE CORPORATION
(Six Months' Alternate Weeks, 1924)

	Dollars	Per Cent
Preparing.....	184,995	35.8
Spinning.....	211,349	40.9
Miscellaneous.....	120,401	23.3
	516,745	100.0

EXHIBIT 4

COMPUTATION OF PLANT INDEX OF MACHINE UTILIZATION IN SOUTHERN
STATES TEXTILE CORPORATION, 1925

	OPERATING GROUPS				PLANT INDEX		
	Jan. (a)	Feb. (b)	Mar. (c)	Weight (d)	Jan. (a × d)	Feb. (b × d)	Mar. (c × d)
Preparing.....	78.84	86.03	81.78	35.8%	28.22	30.80	29.28
Spinning.....	92.14	90.06	91.45	40.9	37.69	36.83	37.40
Miscellaneous.....	88.14	86.19	88.12	23.3	20.54	20.08	20.53
					86.45	87.71	87.21

columns a, b, and c). Exhibit 5 shows the index, constructed in this way, for all the mills for the year 1925.

The two indexes as constructed enabled the statistician to submit to the executives monthly figures which would show changes in machine utilization. These figures, however, were for operating groups and for the mills as a whole. Since each mill was operated by its own superintendent, it was desirable to secure, in addition, an index for each mill, so that if there was a drop in the efficiency of machine utilization within a particular mill, the proper official might be held responsible for the loss.

EXHIBIT 5

SUMMARY INDEX OF MACHINE UTILIZATION FOR TOTAL PLANT OF SOUTHERN STATES TEXTILE CORPORATION, 1925

January.....	86.45	July.....	81.74
February.....	87.71	August.....	81.50
March.....	87.21	September.....	83.47
April.....	85.14	October.....	86.25
May.....	82.54	November.....	87.01
June.....	80.25	December.....	86.98

The calculation of an index for each mill could follow the foregoing procedure, provided a set of weights could be selected that would be comparable to those chosen for the two indexes already constructed. This was accomplished by calculating the mill weight for each department, computed as the product of the department weight by the weight of the group. The index for Mill A, as calculated in Exhibit 6, illustrates the process. Preparing Department No. 2 had a weight of 1.5 (column b) in relation to all other preparing departments of all mills, as shown in Exhibit 2. On the basis of amount of pay roll, the preparing departments had a weight of 35.8 (column c) in comparison with other operating groups, as shown in Exhibit 3. Preparing Department No. 2, therefore, had a weight in relation to all other departments of Mill A of 1.5×35.8 , or 53.7. This figure was equivalent to 4.9%, when the total mill weight was expressed in terms of 100%. When these weights for each department were applied to the department percentages of machine utilization and when the sum of the products thus determined was found, the result was an index for Mill A. These indexes for January, February, and March, 1925, are the totals of columns k, l, and m in Exhibit 6.

Since the various indexes of machine utilization were studied from month to month, they provided the executive with an

EXHIBIT 6

INDEX OF MACHINE UTILIZATION FOR MILL A OF SOUTHERN STATES
TEXTILE CORPORATION, 1925

COMPUTATION OF WEIGHTS				
Department (a)	Department Weight (Exhibit 2) (b)	Group Weight (Exhibit 3) (c)	(b × c) (d)	Mill Weight (e)
2	1.5%	35.8	53.7	4.9%
4	6.5	23.3	151.5	14.0
9	21.9	23.3	510.3	47.1
10	9.0	40.9	368.1	34.0
			1,083.6	100.00

COMPUTATION OF MILL INDEX							
Depart- ment (f)	Mill Weight (col. e) (g)	Department Indexes			Mill Indexes		
		Jan. (h)	Feb. (i)	Mar. (j)	Jan. (g × h) (k)	Feb. (g × i) (l)	Mar. (g × j) (m)
2	4.9%	83.3	93.3	80.6	4.08	4.57	3.95
4	14.0	83.2	78.7	74.7	11.65	11.02	10.46
9	47.1	88.8	86.7	81.9	41.82	40.84	38.57
10	34.0	95.3	99.2	96.2	32.40	33.73	32.71
					89.95	90.16	85.69

effective means of checking the operation of the mills. A drop in the machine utilization, for example, in the index for Mill B, would be studied in connection with the indexes for each of the operating groups. In this way the executive would be able to locate the trouble within a group of operating departments in Mill B.

The causes for the loss in machine utilization would be found in several places. Thus, the maintenance department would be held responsible for delays in repairing machines. An unusual number of breakages, on the other hand, caused by overloading any one department with untrained employees, would indicate ineffective control of labor. Furthermore, too frequent changes in the setting of machines might be caused by the insistence of the sales department on early deliveries of small lots requiring

special runs. Although these causes were all possibilities, in any particular case the determination of the actual cause would be made by the executive from other operating figures. The superintendent of each of the mills knew, however, if his index of machine utilization dropped, that he would be called upon for some sound reasons for this drop in answer to a prompt inquiry from the central office executives.

COMMENTARY: This case illustrates the application of statistical method to the control of production. The method is applicable to those types of business in which the process of production is more or less continuous so that labor is needed only to adjust the machines or to keep the machines supplied with needed raw material.

The statistical method used was that of constructing indexes, so calculated that they showed the loss of time in the use of machines. This loss in use might occur from any one of four causes. These were breakages arising through defective machines, poor raw materials, too many green employees, or resetting the machines for new qualities of product. It is to be noted that in calculating the indexes, the shut-down of a department because of lack of work was not included in the indexes. The indexes thus showed directly the use of the machines supposed to be actually in operation.

Another significant fact is that indexes were constructed by three groups of departments, thus giving a horizontal cross section of all the individual mills. Then an index was made for each mill as a whole, which gave a vertical summary in regard to each mill. Finally an index was computed for the company as a whole.

The use of these indexes would enable the executives to locate quickly defective mill management. For example, if at the beginning of any month, the indexes for a certain group of departments showed a loss, the executives could immediately locate that group of departments in a particular mill by noting the corresponding drop in the mill index. The superintendent of that particular mill then could be held responsible for the loss. Actually, the superintendents themselves would watch the indexes very closely, because they knew they would be called upon to explain any loss that occurred.

It must not be assumed that the executives necessarily were not aware of poor management before the indexes were used. Undoubtedly they often sensed it early. The difficulty would be in locating the trouble promptly. This was the function of the indexes. As an aid in diagnosing incipient trouble they would be a valuable help in the management of these mills.

July, 1929

T. H. B.

WARNER RUBBER COMPANY¹

MANUFACTURER—RUBBER FOOTWEAR

COST ACCOUNTS—*Method of Accounting for Materials.* A company manufacturing rubber footwear kept seven material accounts in its general ledger. When materials were received and were placed in storage, these accounts were debited with the billed cost and freight. When the materials were put into process, the quantity issued was credited to the material accounts at a standard rate, which was the estimated average cost for the balance sheet period of six months. The difference between the standard rate and the actual cost was transferred monthly to a purchase variation account, and at the end of the fiscal period, the balance of this account was closed into Profit and Loss. Under this method the material accounts showed, at the end of each month, the amount of raw materials on hand at cost.

PRODUCTION CONTROL—*Control of Material in Process.* In a company manufacturing rubber footwear, the production ticket was the authority for putting material into process. The cutting department, which had charge of the central stores department, scheduled all materials for the make-up of any production ticket, analyzing each ticket according to type and style of footwear before putting the required materials into process. The production tickets were prepared by the planning department, one week in advance. Rubber stock passed from stores to the milling department, thence to intermediate stores, after which it was, in turn, compounded, calendered, and cut. Because the plant had been delayed on account of insufficient milled rubber in intermediate stores, the company considered two proposals for modifying its existing method: one was to install a balance-of-stores system for milled rubber in the intermediate storeroom; the other was to extend the production ticket to cover the milling department, instead of using it to start operations in the cutting department.

The Warner Rubber Company, which was one of the subsidiaries of a parent company, consumed annually over \$10,000,000 worth of materials in the manufacture of rubber footwear; the method by which the materials were charged into process and the company's control of material in process were therefore important.

The total value of these materials was divided among seven material accounts approximately as follows:

¹ Fictitious name.

Rubber.....	\$ 3,550,000
Reclaimed Rubber.....	300,000
Chemical Compounds.....	950,000
Dry Goods.....	4,320,000
Shooks, Cartons, and Boards.....	420,000
Findings.....	480,000
Miscellaneous.....	20,000
Total.....	<u>\$10,040,000</u>

All materials were ordered by the purchasing department upon receipt of a notification from the balance-of-stores clerk that the minimum quantity had been reached. This minimum quantity was determined by the purchasing department on the basis of the quantity usually consumed during the time required to receive the material after the order had been placed, plus an allowance to take care of unforeseen delays and other emergencies. The immediate future requirements usually determined the quantity to be ordered at one time, although when the materials could be obtained at a favorable price, larger orders might be placed. When an exceptionally favorable price could be obtained, orders might be placed before the minimum quantity was reached.

After the materials had been checked by the receiving department, they were placed in storage under control of a centralized balance-of-stores system. The balance-of-stores cards recorded the unit cost, total cost, and quantity of each material placed in storage. The seven material accounts which were kept in the general ledger were debited with the billed cost and freight; cash discounts which might be taken were closed into Profit and Loss.

Since the cutting department scheduled all materials for the make-up of any production ticket, it had charge of the central stores department. Subsidiary storerooms were scattered throughout the factory, but the slips for all materials requisitioned from them were sent to the general stores clerk. The cutting department analyzed each production ticket according to type and style of footwear, in order to calculate the quantity of each material required, and the balance-of-stores clerk thereupon made sure that there were adequate stocks of all the materials required. Rubber was not compounded or calendered until it was needed by the manufacturing department; the production ticket was the authority for putting material into process. When the materials were put into process, the quantity issued was recorded on the balance-of-stores cards; the work-in-process account was debited

and the material accounts were credited at a standard rate, which was the average cost, including freight, that the management estimated it would have to pay during the balance sheet period of six months.

The Warner Rubber Company determined the cost of each style and type of shoe by running test orders through the factory. The standard rates for labor, material, and overhead which were established during the test orders were used in determining costs of finished products. The departmental accounts were debited with actual expenditures and credited with a standard rate when the shoes were finished. The balances in the labor and overhead accounts were used as a guide in determining the efficiency of the departments.

At the close of each month, an adjustment was made in the material accounts to correct discrepancies which had been caused by variations in the purchase price from the standard. Inasmuch as the raw material accounts had been credited at the standard cost for materials put into process and had been debited at actual cost, the balances consisted of the inventory of materials on hand at actual cost, minus the saving or plus the loss on the actual cost of materials compared with the standard. The materials on hand were inventoried at an average cost price, determined by such computations as are shown in the following example:

Inventory.....	100,000 pounds at 18 cents	\$18,000
Purchased.....	10,000 " " 19 "	1,900
"	50,000 " " 21 "	10,500
Inward Freight.....		500
Total.....	160,000 pounds	\$30,900
Average Cost 19.31 cents per pound		

The difference between the standard rate and the actual cost was transferred monthly to an account called Purchase Variation. When the books were closed for the fiscal period, the balance in Purchase Variation, which represented the net saving or loss compared with the standard rate, was closed into Profit and Loss. The balances of the raw material accounts then showed the amount of raw materials on hand at cost.

The production tickets which were the authority for putting material into process in the Warner Rubber Company were prepared by the planning department one week in advance. Since orders for rubber footwear were filled from stock whenever pos-

sible, most of the production tickets were standard stock orders. Variation in the demand for different sizes and types of footwear, however, caused irregularities in the tickets which made careful scheduling of materials essential. The company had, therefore, developed a centralized control of material in process.

The rubber, which was received in bales, was cut into slabs and placed in stores. It was put into process by the milling department at a rate estimated to be sufficient to keep a minimum stock ready for compounding. The milling process, which required from 15 minutes to an hour, according to the grade and toughness of the rubber, consisted of making the raw rubber soft and pliable. The milled rubber was placed in intermediate stores for a period ranging from 30 to 45 hours before it was transferred to the compounding room.

When rubber was taken from the intermediate storeroom to be compounded, it was first warmed on a two-roll mill. Reclaimed rubber was mixed with the raw rubber in this process in order to give it the desired degree of toughness. While still warm, the rubber, together with the chemicals, was placed on the compounding calenders. Definite times were set for the compounding of each batch. An inspector noted the starting time, notified the worker when the batch should be completed, and inspected the product. The compounded rubber was rolled into chunks weighing about 30 pounds, and placed in another intermediate storeroom where it remained from one-half to three or four days.

Before it was run on the "upper" or "outsole" calenders, the compounded rubber was warmed in a two-roll calender or milling machine. The upper calender pressed out thin sheets of rubber, which were marked with the outline and size of the binding edge, by means of an engraved roller, as a guide to the cutters. The engraved rolls were interchangeable, so that any number of sizes and styles might be run on one calender. When stock came from the calender, it was carefully gauged to obtain the proper thickness. Outsoles were marked in the same manner, but the gauge was thicker.

Fabrics taken from the materials storeroom were coated on a calender consisting of at least three cylinders, one above the other, all geared to revolve at the same speed. The rubber was inserted between the upper two rolls, and was pressed on to the fabric between the two lower rolls, forming a rubber-lined cloth. Friction

tioned fabric had the rubber pressed into the cloth itself. The middle roll of a friction calender was geared to run twice as fast as the other two, in order to force the warm rubber into the meshes of the cloth. In the case of all frictioned and some coated fabrics, an interlining of plain cloth was used to prevent the freshly coated parts from coming into contact with each other.

After being calendered, the rubber stock was cut into lengths of convenient sizes before it was taken to the cutting department. After the uppers and outsoles had been cut, they were put into a wooden frame with six sheets of cloth sewed on one side in the form of a book. The number of the maker to whom each book was going was marked on the frame before it was taken to an intermediate storeroom. The fabric, some of which was frictioned and some of which was coated, was cut into 15-foot lengths, and placed in piles of from 8 to 40 thicknesses for cutting. A sheet of paper was placed between the lengths to prevent sticking. After the fabric parts were cut, they were placed in a storeroom in the cutting room known as the "post office," where they were counted, separated from the paper, and put up in sets for the makers according to a production ticket.

From the post office the parts called for on the production ticket were sent to the making department to be manufactured into shoes. Spoiled material was taken back to the calendering department to be worked into a new batch. Spoiled coated fabric, however, became waste. Material trimmed from the shoes, after they had been vulcanized, as well as the waste from the cutting department, was baled and sold. The amount received for this waste material was credited to material in process.

At one time the plant was delayed because of insufficient milled rubber in the intermediate store. As a result, two plans for remedying the situation were suggested. One proposal was that a balance-of-stores card, on which all milled rubber should be recorded when placed in storage and when requisitioned, should be installed in the intermediate storeroom. Another proposal was that the production ticket should be extended to cover the milling department, so that, instead of using the production ticket to start operations in the cutting department, all operations would be based on the amount of material required to manufacture the shoes ordered on a production ticket. The only change from the existing system would be that the milling department would oper-

ate on a ticket four days before the cutting department, the compounding department two days before the cutting department, and the calendering department one day before the cutting department.

COMMENTARY: The dominant feature in this case is the fact that a standardized product was being made to a budgeted or predetermined schedule; this schedule set forth not only quantities, but values also in the form of estimated costs. All operations were carried on as sub-schedules of this main plan or budget; in these circumstances the business of the cost records was to show clearly how well the actual facts agreed with the budgeted figures, and to indicate the causes for any differences which might arise. The general monthly cost sheet should show the losses or gains arising from purchasing above or below the budgeted figures, and also, separately, the losses or gains arising from efficiency in the use of materials in the manufacturing processes. The detailed accounting procedure would accordingly be designed with this principal objective in view.

In addition there was needed a control of inventories of raw materials and work in process, in the sense of determining the quantities which it was desired to have on hand at different stages in the manufacturing process and at different times of the year. There was still further need of an order-tracing agency by which specific orders might be easily located. This was desirable especially in conjunction with the task of regulating the output of different sizes of shoes according to the latest market developments.

The management would have to decide which of these records must be kept within the financial accounting system proper, which of them should be kept as subsidiary or auxiliary financial records, but still closely connected with the financial accounting, and which of them should be handled in the form of statistical reports and records, perhaps dealing in quantities only, and only remotely connected with the accounting.

To begin with the accounting records proper, it seems clearly desirable to have one ledger account for each principal raw material or group of materials. These accounts would, as described in the case, be debited with purchases at actual cost. It might be mentioned that some concerns debit the materials account at once with standard costs, eliminating the purchase variations on the invoices, the difference being carried to the purchase variations account in the ledger. In the case of the Warner Rubber Company, the debits at actual and the credits at standard brought out the purchase variations within the materials account itself, after allowing for the inventory at the end of the period. It is also to be observed that by figuring that inventory at actual cost

(which is what the averaging method really gives) the purchase variations were ascertained upon the quantity *used* during that period. If the inventory were taken at standard, the result would be to disclose the variations on the quantity purchased during the period.

One ledger account is usually kept for materials in process, but there is some dispute among practitioners about the number of accounts which it is desirable to have for the process costs, that is, for labor and burden added to materials in the several processes. Some are content with one account covering all processes; others prefer to use three accounts, one for milling and compounding, one for calendering, and one to include all the subsequent departments. Still others believe it desirable that the latter group should be subdivided into separate accounts for cutting, making, varnishing, vulcanizing, packing, and lasts. It may at least be said that cost information should be kept which shows the results of each of these departments, and if objection is found to incorporating all these separate accounts in the ledger, then the statistical reports must be prepared showing this amount of analysis. While these departmental accounts will, as stated, contain only the labor and burden added to materials in the respective departments, the material-in-process account may contain in one sum the total of all materials from the time they enter the first process to the time when they emerge as finished product. The credits made to the process accounts for the finished goods delivered from the factory would, as stated, be made at standard figures based upon the budgeted allowances for the various operations and for the various styles of shoe; the standard material cost would be credited in the material-in-process account and the standard manufacturing cost (labor and burden) for the several departments would be credited in their respective departmental accounts. The material-in-process account would, when it had been credited with the closing inventory on hand, show the variations in the quantity of materials used for the product actually manufactured, as compared with the standard quantity for that volume of output; the process or departmental accounts would similarly show the variations in labor and burden.

The raw material inventory in the Warner Rubber Company was controlled by the usual form of perpetual inventory record, though one or two points of exceptional practice are found in connection with it. The remark is made that the "minimum quantity was determined by the purchasing department;" the real significance of this remark lies in the fact that the Warner Rubber Company was a subsidiary of a parent company in which the purchasing agent bought for all the manufacturing plants. He was, therefore, an officer of considerable importance and authority; to him the various departments reported when their minimum quantities were reached and replenishment was

desired, and he operated a coordinated purchasing and delivery policy covering all plants. The stores quantities were designed to fit in with this general policy. In these circumstances, more elastic limits were naturally imposed than is sometimes the case; the purchasing agent was accorded a considerable degree of discretion in purchasing according to market conditions. Another interesting feature is that the perpetual inventory record was kept in duplicate, one set in the stores and one set in the cost department. The former was kept by quantities only, and it was this set which formed the basis of reports to the central purchasing agent calling for replenishment of the items which had reached the minimum. The perpetual inventory record in the cost department, on the other hand, contained values as well as quantities, and provided the information upon which the cost department arrived at the transfer amounts between the various departmental accounts, and also at the inventory values from time to time.

In addition to the perpetual inventory of raw materials, a corresponding record would have to be kept for work in process. This would consist of the file of manufacturing orders in process, the sum total of which would at all times be worth the balance shown in the various process accounts, subject to the adjustments referred to. It is here that one of the order-tracing devices would need to be installed in order that any order that was wanted might easily be located.

The point raised in the last paragraph of the case does not appear to call for any very far-reaching change; in fact, it is somewhat inconsistent with earlier statements (page 83) to the effect that "rubber was not compounded or calendered until it was needed by the manufacturing department." From this it would appear that the earlier processes were already correlated with those which followed. At any rate it doubtless would be unwise to disturb the existing arrangement by which the cutting department first received manufacturing orders and upon them issued sub-instructions to the contributory departments. Apparently it would be easy to precede such manufacturing orders with prior instructions issued to the milling and compounding department for the necessary supply of rubber. If it were believed that a card for milled rubber in the perpetual inventory would be helpful in this situation, the device is very simple and might be adopted.

March, 1927

T. H. S.

BAKA BISCUIT COMPANY¹

MANUFACTURER—CEREAL

COST ACCOUNTS—*Change from Cumulative to Detailed Figures in Inventory in Process Accounts.* In a company manufacturing a cereal biscuit, the production processes were divided into four primary operations; there were three process inventory points, one between each two of these operations. The company's cost accounting system was designed to show the accumulated cost of the process at each of these points; the total figure at each point included material, labor, and burden costs. At the request of a new vice president in charge of finance, the comptroller revised the company's departmental and inventory cost sheets in such a way as to show the inventory in process accounts in detail rather than in a single total, and also to show costs of operation on a material, labor, and burden basis, so that, as the work progressed through the plant, the increase in each of the elements of cost would be shown. The comptroller also decided to adopt standard costs, in order to ascertain total, quantity, and price variations, for purposes of statistical and managerial control.

(1928)

The Baka Biscuit Company was organized in 1903 to manufacture a cereal biscuit under a process patent which it had obtained. A favorable reception of the product by the public had assured the company of success from its inception, and its growth had been steady and continuous; the productive capacity of the plant had been doubled in the first 25 years of its existence. At full capacity the factory employed about 700 people, many of whom were girls. A considerable number of the manufacturing operations were performed by automatic machines, which had been specially developed by the company. The machines were arranged in groups, each group operating as a complete production unit, and as many units were operated as would produce the quantity of biscuits needed to satisfy the consumer demand.

The process of producing a biscuit was divided into four primary operations: (1) cleaning and sorting the grain used; (2) steam cooking and drying; (3) grain grinding and biscuit

¹ Fictitious name.

molding and baking; and (4) packaging, sealing, and packing for shipment. There were three process inventory points as the grain flowed through the plant, one between each two of the above named operations. At each of these points the material in process was easily measured or counted; thus, the company was able to keep accurate daily records of the material that passed from one operation to the next. Because the process inventory was so easily available at these points, the cost accounting system was designed to show the accumulated cost of the process at each of them.

The cost procedure used by the company, which was based upon the process method of cost accumulation, had been comparatively simple. Since the company produced only a single product which had to bear all the costs, the management always had been of the opinion that an elaborate system of accounting was unwarranted.

Direct materials, of which grain was the most important, were furnished to the plant in sufficient quantities to supply adequately the units operating. The amount of grain requisitioned to process as well as the amounts passing from operation to operation were determined from the foremen's daily reports. The packages and cartons required were checked in the same way, while the monthly totals of all production quantities were obtained from summary operation sheets compiled from the foremen's daily reports. The materials were charged into process at the average cost of the inventory on hand and charged from each operation to the next at the average cost of the beginning inventory at that center and the production for the month.

Indirect materials required by the factory were obtained from the storeroom by requisitions signed by the foreman, who noted, in addition to the supplies wanted, the account number to which the materials were to be charged. These requisitions were forwarded from the storeroom to the cost department, where they were priced and extended and the quantities were entered on the balance-of-stores cards. At the end of each month, the requisitions were then sorted according to account numbers, and the total cost of the indirect materials requisitioned was ascertained for each account number, which gave, for the period, the indirect material charges for special work orders and the different departments. When special items were purchased outside, they were, when

received, sent directly to the requisitioner, and the account to which they were to be charged was debited at once from the voucher register.

The principal source from which the company determined the labor charges for the various departments was the weekly clock cards upon which the time clock stamped the time at which each person entered and left the plant. These cards were collected every week in each department and sent to the pay roll office, where a clerk totaled the number of hours worked by each employee, as shown on his card, and multiplied the total by the employee's hourly rate to compute his weekly earnings. After these calculations had been checked, the pay roll sheet was made up, showing, in addition to the earnings of each employee, the total direct and indirect labor charge in each department. The totals were then taken by the cost office and distributed to the various departments.

Employees were frequently transferred for short intervals from one department to another, and adjustments had to be made in the amounts obtained from the pay roll sheets in order to obtain the correct departmental labor charge for the period. The various departmental foremen made out transfer slips whenever one of their employees worked in another division of the shop; this slip recorded the department to which the employee was sent and the time he remained there. The labor charge was figured for each transfer and these charges were summarized at the end of the month, at which time adjustments were made in the pay roll totals to obtain the corrected labor costs for the period. Because a month seldom ended on the same date as the pay roll week, it was usually necessary for the cost department to analyze also the clock cards for the last few days of the period, in order to complete the labor charges.

In the service departments the employees were required to keep, in addition to the regular clock card, a second record of their time. They were engaged either in regular work, or in special work for which the cost department had issued order numbers to which all charges were to be made. Each employee had to fill out a report showing the amount of time spent on each job and the order number to which it was to be charged. The reports were sent to the cost office, where the labor charges for the time spent on the different jobs were summarized. The total

number of hours worked per week by each employee, as shown on these reports, was checked against the hours shown by their time clock cards.

The expenses of the nonproductive departments of the company were distributed directly to the productive departments wherever such allocation was possible; for instance, expenses involved in doing work on standing or special orders for particular departments of the factory were charged directly to those departments. The costs of operating some of the other service departments were distributed on the basis best suited to the situation; the expenses of the power plant, for example, were allocated according to the amount of steam and power used by each department. Those expenses which could not be directly charged to the various producing departments were charged to the general factory burden account, which was distributed to the producing department on a direct labor cost basis.

The comptroller was aware that this method of allocating general burden was not so accurate a method as might be devised but believed it to be adequate for his purposes. Since the company produced only the one product, there was little to be gained by a complicated method of burden distribution. Formerly, the general burden account had been distributed on three different bases, but when a trial distribution on the labor cost basis showed that approximately the same results were obtained, the company had concluded that use of the three methods was not warranted. Furthermore, since the total direct labor cost was about equal to the amount of burden to be distributed, it was large enough to be a satisfactory base for the distribution of burden.

After the expenses were distributed, departmental cost sheets were made up which were summary statements of all costs incurred for the period. The totals of the figures shown on these sheets were carried to the departmental inventory accounts, which contained the beginning inventory plus the departmental production cost; there were two credits in the inventory accounts, one showing the cost of the goods transferred to the next department and the other the final inventory. A sample of the cost sheet and the inventory account is given below.

HARVARD BUSINESS REPORTS

DEPARTMENTAL COST SHEET

Cleaning Department		October, 1928
Grain.....		\$45,000
Direct Labor.....		3,055
Indirect Labor.....		600
Supplies.....		350
Cost Orders Completed.....		1,120
General Burden.....		2,775
Total Cost.....		<u>\$52,900</u>

DEPARTMENTAL INVENTORY ACCOUNT

Cleaning Department		October, 1928	
Debits		Bushels	Amount
Beginning Inventory.....		1,500	\$ 2,100
Production for Month.....		42,500	52,900
		<u>44,000</u>	<u>\$55,000</u>
Credits			
Ending Inventory.....		1,200	\$ 1,500
Forward to Cooking Dept.....		42,800	53,500
		<u>44,000</u>	<u>\$55,000</u>

By means of this system of preparing cost sheets, all items of expense were added together and carried to the inventory accounts as the cost of the grain processed; the total figure included material, labor, and burden costs. On the inventory sheet the value of the product sent to the next department was ascertained by using the average of the beginning inventory value and the production cost for the period. This average price, multiplied by the quantity of bushels transferred to the next department gave the dollar amount of the charge to that department. The cost was thus cumulative; the quantity and cost of the material charged out of one department had to be determined before the cost sheet for the succeeding department could be prepared; the cost arrived at in the last department represented the cost of biscuits finished during the period; it was credited to the last department and debited to finished goods. The three departmental inventory accounts, an account controlling the balance-of-stores cards for direct materials entering into the product, and another for indirect materials were kept in the factory ledger. These five accounts were controlled by an account in the General Ledger entitled "Product Materials."

In 1928 the company employed a new executive to be known as the vice president in charge of finance. At the usual intervals the regular reports, made up as shown on the above cost sheet,

were sent to the new executive. He stated that the reports were inadequate and requested the comptroller to prepare a report which would show the inventory in process accounts in detail rather than in a single total. He also wanted the reports to show costs of operations in the factory on a material, labor, and burden basis, so that as the work progressed through the plant, the report would show the increase in each of the elements of cost rather than one cumulative total.

Since the company's accounts had not been kept in such a way as to supply the information requested, the comptroller had to analyze in detail all the cost sheets, carrying forward separately the material, labor, and burden charges from one department to the next. Where there was an inventory in process, the percentage of the three elements of cost in the inventory also had to be determined. This analysis required considerable work, and as it had to be done month after month, the comptroller decided to revise the cost system so that the type of information wanted could be obtained directly from the regular records.

The changes which the comptroller decided to make in the cost system were confined entirely to the way in which the departmental cost sheets and inventory cost sheets for the period were prepared. Under the revised system, the departmental cost sheets were to be so devised as to incorporate the statistical information which the new vice president desired, and the departmental inventory sheets were to be divided into three sections, one each for material, labor, and burden. In addition, the method of costing the inventory was changed. The price of the oldest lot on hand was to be used instead of an average price, since the latter had the disadvantage of incorporating price variations caused by abnormal conditions, thus perpetuating them in the charges to be made for goods put into process.

The comptroller was of the opinion that the adoption of standard costs would be advantageous, because total, quantity, and price variations could be ascertained; such costs were to be used for statistical and managerial purposes only. The standards set for the processes were to be developed from the operation records of the more efficient units in the shop for the preceding year and were to be revised from time to time as better statistics became available. In the development of the new system, the standard costs and total variances were to be carried out accurately

to the nearest cent, but the quantity and price variations were to be worked out only to the nearest dollar, as they were to be used for statistical purposes only. When standard costs exceeded actual costs, the amounts were to be entered in black, and when actuals exceeded standards, the variation was to be entered in red.

The inventory sheet under the new method was designed to be used for all departments and to show the three elements of cost. A sample of the revised sheet is shown in Exhibit 1.

To reduce the clerical work, actual amounts were not entered on this sheet; the accounting procedure was carried through with standard costs and total variations, from which at any time the actual costs could be determined. The beginning inventory was ascertained from the inventory account for the preceding period, and the quantities of material handled by each department, measured in bushels, were obtained from the monthly summary of the foremen's daily reports. The accumulated standard rate to the end of the particular department was given as the first figure in column E. This rate times the quantities carried in the second column gave the standard labor cost for processing those quantities. In the Total column was entered the variation, which was found by comparing the actual costs of each department for each of the items listed with the standard cost as given in column E. In the Per Cent column the closing inventory was expressed as a percentage, which was computed by dividing the final inventory quantity by the volume of production, both of which were given in the second column. The closing inventory variance was obtained by multiplying the percentage of closing inventory given in the first column by the total variation for production given as the first figure in the Total Variance column. The Quantity and Price columns contained the analysis and detail of the total standard variation figures. As pointed out, these last two columns were carried only to the nearest dollar. At the right of the labor variance section were the material and burden variance sections, which were handled in much the same manner as the labor section. To economize space these sections are omitted in Exhibit 1.

In the computation of the cost of production in the different departments, separate sheets were to be made up for labor, material, and burden. A copy of the labor cost sheet is given as Exhibit 2.

The standards which had been set for the different operations were entered in the first three columns of this sheet. The actual totals of the operations, expressed in the proper units of measurements, were given in the fourth column. The next three columns were used for the calculation and recording of costs, while the last three columns contained the variations between actuals and standards on the various operations.

October, 1928		Departmental Inventory Sheet				
		Actual Quantity	Labor Variances			
			Standard	Total	Quantity	Price
	Per Cent		E	TV	QV	PV
Cooking and Curing...			\$0.019673			
Production.....		41,963	825.54	\$9.24	\$14.	\$5.*
Opening Inventory....		2,200	43.28	1.02*	1.	2.*
Closing Inventory.....	3.16231	1,327	26.11	.29		
Amount Used.....		42,836	842.71	7.93	15.	7.*
Grinding and Baking..						
Production.....						
Opening Inventory....						
Closing Inventory....						

* Figures in red.

Exhibit 1: Inventory sheet used in Baka Biscuit Company.

The labor cost sheet shown above is for the department following the one considered in the departmental inventory sheet given in Exhibit 1. Consequently, the Amount Used as shown on the inventory sheet was brought forward and entered on the labor cost sheet on the first line in column D. As past experience in the grinding and baking department indicated that 8.3 bushels of grain would make 1,000 biscuits, these figures were taken as the standard in that department, as shown in column A. Because of changes in the quality and class of grain used, this ratio varied,

so that actually more or less than 8.3 bushels of grain had to be used to produce the standard of 1,000 biscuits.

LABOR COST SHEET—OCTOBER, 1928					
	A	B	C	D	E
	Standard	Standard	Standard	Actual Units	Std. Cost
	Amt. per Unit of Production	Operation Rate per Unit Amt.	Cost per Unit of Production A×B	Measured Quantity or Amount	"C" Times Production
Grinding and Baking Labor Forward Actual..	8.3 bu.	\$.019673	\$.163	42,836 bu.	\$ 830.79
Labor Forward Standard				42,836 bu.	
Grinding Labor.....	.374 hr.	1.914	.716	1872.50 hr.	3,649.35
Baking Labor.....	.251 hr.	1.322	.332	1307.25 hr.	1,692.16
Biscuit Production.....	1,000 Biscuits		\$1.211	5,096,860 (1,000 Biscuits)	\$6,172.30

LABOR COST SHEET—OCTOBER, 1928					
	F	G	TV	QV	PV
	Act. Units at Std. Rate	Actual Cost	Total Variance	Quantity Variance	Price Variance
	B × D	Dollars	E - G	E - F	F - G
Grinding and Baking.....		\$ 834.78	\$ 7.93	\$15.—	\$ 7.—*
Labor Forward Actual.....	\$ 842.71	.....	11.92*	12.—*	
Labor Forward Standard.....	3,583.97	3,674.92	25.57*	65.—	91.—*
Grinding Labor.....	1,728.18	1,663.47	28.69	36.—*	66.—
Baking Labor.....					
Biscuit Production.....		\$6,173.17	\$ 0.87*	\$32.—	\$32.—*

* Figures in red.

Exhibit 2: Labor cost sheet used in Baka Biscuit Company.

The total variation was equal to the difference between the standard labor charge for the material entering the department and the standard labor charge up to the same point on the actual

production in the department. Thus, on the second line, the standard labor cost for the amount of grain used, which should have produced 5,160,964 biscuits, was given as \$842.71, as taken from the inventory sheet, while the standard labor cost for the actual number of biscuits produced, which was 5,096,860, was \$830.79. The differences in the figures represented the amount of loss in units and dollars due to changes in the quantity of material contained in each biscuit, because of processing conditions; this difference was an additional quantity variation.

The labor costs of the two operations performed in the grinding and baking department were developed on the third and fourth lines of the form. The amounts given in columns D and G on these lines were determined from the actual records for the period, which, when used in conjunction with the standard rates and the amount of production, were sufficient to complete the sheet. The letters in the columnar headings indicate how the figures in the columns were determined. The information to be carried forward to the inventory sheet of the next department was obtained from the last line, on which the costs for the department were summarized. This procedure was followed also in the case of material and burden and for each department throughout the process; as under the old system, the cost of the product finished in the last department gave the debit to the finished goods account.

Usually the quantity and price variations were worked out at a later date than the total variation, as they were used only for statistical purposes and did not need to be developed immediately in order to complete the cost records. Under the new system, an inventory in process account for each of the three elements of cost was kept in the factory ledger. These accounts, as was intended, contained only actual cost of the materials; the supporting statements and departmental inventory sheets, as already indicated, carried only standard costs and variations.

COMMENTARY: The coming of a new executive is often the occasion for a considerable revision of the cost accounting work, not only because each man has his own ideas on this subject, but still more because he finds himself under the necessity of digesting and familiarizing himself with the facts and conditions of a new plant, and probably the most effective way of doing it is to have cost analyses made along the lines which seem of interest and importance to him. Although, therefore, this case was one in which ordinary process costs were

applicable, and the fact of having only a single product simplified the problem in some respects, yet it is clear that the existing records were insufficient to give the new executive the necessary grasp of the fundamentals attached to his problem. It was, therefore, reasonable that he should wish to make a completely new approach, and not be content with minor adjustments of existing methods.

Three main features may be noted in the changes which he instituted: (1) the introduction of standard costs; (2) the separation of material, labor, and burden items in aggregate and unit costs; and (3) the cumulative character of the figures he developed, by which they carried the cost from one department to another, finishing with the total costs of the product at the end of the last process. Taking these matters in order, the situation was an ideal one for the use of standard costs; it is difficult to see how the situation could be properly controlled without them. The separation into the three main divisions of cost was very natural in a case where the production problems and the cost variations arose chiefly from differences in the quality of wheat purchased; these differences occasioned marked variations in the number of biscuits which could be made for a bushel of wheat, and it was this fact which was responsible chiefly for the variations in labor and burden cost. This was the reason for the division of the total variation between standard and actual costs into quantity variation and price variation; usually the former was much the more important, and a close observation of it permitted a more effective policy in wheat purchasing. With regard to the cumulative nature of the figures, a question might be raised as to whether it would not be more helpful to show the unit and total costs for each department alone, and the variations in them: apparently the vice president preferred the cumulative figures, partly because they showed the total loss when waste or spoilage occurred at any point in the processes, and partly because the cost sheets were tied in with the inventory figures; for both these purposes, of course, the value of the product in process was the cumulative cost up to that point.

The apparently intricate figures in the forms will be found reasonable and intelligible upon examination, and it is of interest to note that these methods were worked out by the comptroller at the suggestion of the vice president himself and not on the initiative of the cost department.

March, 1929

T. H. S.

PRESCOTT & NORTHWESTERN RAILROAD COMPANY

OUACHITA & NORTHWESTERN RAILROAD COMPANY¹

RAILROADS—LUMBER

RAILROAD RATES—*Unfair Routing of Tap Line Traffic.* The practice of two tap lines, each affiliated with a lumber company, in hauling proprietary traffic over unnecessary and circuitous routes before delivery to a connecting trunk line, rather than directly to points of junction with the connecting line, in order to secure an increased division out of the through rates on interstate shipments, was condemned by the Interstate Commerce Commission as unfair to the trunk line. The commission ruled that the distances from the junctions which were determinative of the maximum divisions that the trunk line might lawfully pay out of the through rates to the tap lines must be measured by the direct route of movement toward final destination.²

(1919)

EASTMAN, *Commissioner*:

This proceeding brings in issue the lawfulness of divisions of through interstate rates on carloads of lumber and forest products moving from the proprietary mills of the Prescott & Northwestern Railroad Company and the Ouachita & Northwestern Railroad Company. The question is the same as to each tap line; the cases were heard together and will be so disposed of in this report.

At a hearing held after service of a tentative report upon the two railroad companies above named and the Missouri Pacific Railroad Company, the parties in interest, it developed that certain of the practices which were questioned had been eliminated. One practice of the Ouachita & Northwestern Railroad Company in hauling lumber destined to St. Louis and other northern, eastern, and western points from the mill at Clarks 25 miles to its junction with the Tremont & Gulf Railroad, whence the cars were transported by the latter company by way of Menefee Junction to Rochelle and delivered to the Missouri Pacific, thence by the Missouri Pacific back to Clarks and on to St. Louis, had been discontinued; but the tariff covering this unnecessary route has not yet been canceled.

It is not necessary to discuss other practices mentioned in the tentative report which had been eliminated or were satisfactorily explained. We shall confine ourselves, therefore, to the consideration of two

¹ 53 I.C.C. 656 (June 30, 1919).

² Headnote by Graduate School of Business Administration.

practices, one of the Prescott & Northwestern Railroad Company, and the other of the Ouachita & Northwestern Railroad Company, which existed at the time of the hearing.

1. The Prescott & Northwestern Railroad Company is a tap line organized as a common carrier under the laws of Arkansas, and is affiliated with the Ozan-Graysonia Lumber Company. A full description of this road is given in our report in *The Tap Line Case*, 23 I.C.C., 549, 569, and the following sketch (Exhibit 1) shows the rail lines.

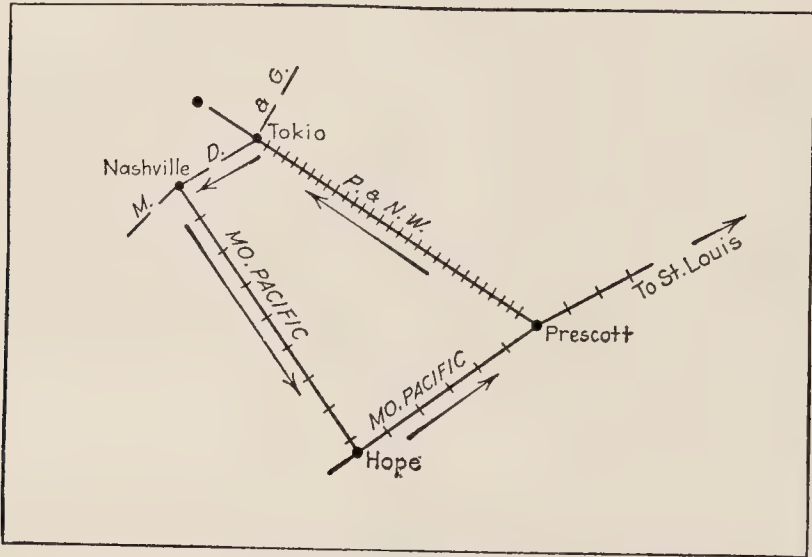


Exhibit 1: Location and connecting lines of Prescott & Northwestern Railroad Company.

The Ozan-Graysonia Lumber Company owns and operates a mill at Prescott, Arkansas, on the Missouri Pacific Railroad and the Prescott & Northwestern. The mill is located at a station on the latter road called Dian, and is less than one mile from the junction point of the two railroads. All interchange traffic with the Missouri Pacific may be received or delivered at Prescott, involving a movement by the Prescott & Northwestern of less than one mile. Instead of doing this, it has been the practice of the Prescott & Northwestern to haul all cars of lumber and forest products intended for the Missouri Pacific 29 miles to Tokio, Arkansas, and there deliver them to the Memphis, Dallas & Gulf Railroad. The latter company transports them to Nashville, Arkansas, where they are delivered to the Missouri Pacific; the Missouri Pacific then conveys them via Hope Junction, Arkansas, and, if destined to St. Louis, or northern, eastern, or western points, back to Prescott. In other words, instead of delivering the products of the proprietary mill, destined to points on the Missouri Pacific or beyond by a simple switching movement, the traffic is carried out of line for 76 miles and brought back to Prescott, and then proceeds to

destination. The tap line claims the right to make this circuitous and unnecessary haul in order that it may earn a larger division out of the through rate.

2. The Ouachita & Northwestern Railroad Company is organized under the laws of Louisiana as a common carrier and is affiliated with the Louisiana Central Lumber Company. A description of this road is given in our report in *The Tap Line Case*, 23 I.C.C., 549, 603. The Louisiana Central Lumber Company has a mill at the point called Clarks, Louisiana, and another at a point called Standard, Louisiana, 10.5 miles south of Clarks. The two mills are connected by a track of the tap line paralleling the main track of the Missouri Pacific, but the direct haul over the tap line to a junction with the Missouri Pacific in each case is less than one mile. The sketch (Exhibit 2) shows the location and the connecting lines

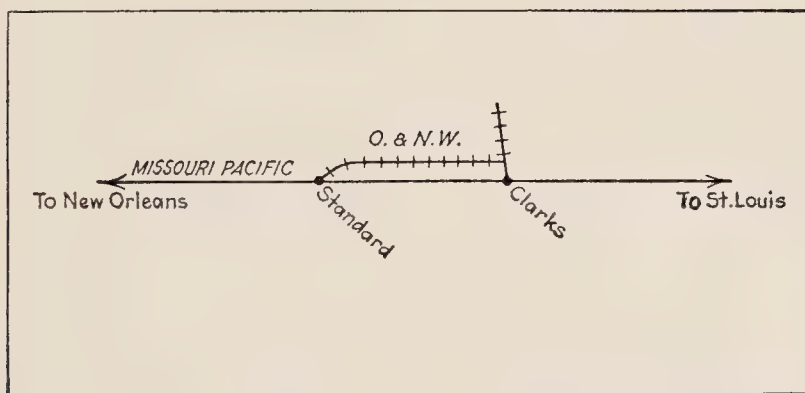


Exhibit 2: Location and connecting lines of Ouachita & Northwestern Railroad Company.

A large portion of the traffic from the mill of the Louisiana Central Lumber Company at Clarks moves to St. Louis and eastern and western points over the Missouri Pacific. It has been the practice of the tap line to haul this traffic to Standard, where it is delivered to and hauled by the Missouri Pacific back to Clarks, whence it moves to final destination. A like unnecessary and circuitous haul has been the practice in the case of the products from this company's mill at Standard. Here a large portion of the product of the mill is for export and goes to New Orleans. This traffic has been hauled by the tap line to Clarks and there delivered to the Missouri Pacific, which latter company hauls it back through Standard to its destination. No question is raised as to the right of the tap line to haul lumber which is destined to New Orleans and the South from the mill of the lumber company at Clarks to Standard, making delivery there, as that movement is in a direct line toward the point of final destination; nor is any question raised as to the right of the tap line to haul the products of the mill at Standard intended for St. Louis and eastern and western

points to Clarks, and there make delivery of such traffic to the Missouri Pacific. The practice that is questioned is the unnecessary hauling of lumber by the tap line from either mill in the opposite direction from its destination and out of line, making deliveries at points that involve the return of the traffic to the station at which the originating mill is located before it moves toward its final destination.

3. The reason for these out-of-line hauls will be understood by a brief review of the tap line cases. In *The Tap Line Case*, 234 U.S. 1, 28, 29, the Supreme Court of the United States held that a tap line, of the character of the two lines here involved, is entitled to divisions out of the line rate in this territory as compensation "for what it actually does" in performing transportation covered by the through-line rate, but the court said:

It is doubtless true, as the commission amply shows in its full report and supplemental report in these cases, that abuses exist in the conduct and practice of these lines and in their dealings with other carriers which have resulted in unfair advantages to the owners of some tap lines and to discriminations against the owners of others. Because we reach the conclusion that the tap lines involved in these appeals are common carriers, as well of proprietary as non-proprietary traffic, and as such entitled to participate in joint rates with other common carriers that determination falls far short of deciding, indeed does not at all decide, that the division of such joint rates may be made at the will of the carriers involved and without any power of the commission to control. That body has the authority and it is its duty to reach all unlawful discriminatory practices resulting in favoritism and unfair advantages to particular shippers or carriers. It is not only within its power, but the law makes it the duty of the commission to make orders which shall nullify such practices resulting in rebating or preferences, whatever form they take and in whatsoever guise they may appear. If the divisions of joint rates are such as to amount to rebates or discriminations in favor of the owners of the tap lines because of their disproportionate amount in view of the service rendered, it is within the province of the commission to reduce the amount so that a tap line shall receive just compensation only for what it actually does.

In conformity with this decision of the Supreme Court the commission on July 29, 1914, entered an order in *The Tap Line Case*, 31 I.C.C., 490, requiring the defendant trunk lines, one of them being the St. Louis, Iron Mountain & Southern Railway Company, now the Missouri Pacific Railroad Company, to reopen through routes and publish joint rates to interstate destinations with each of the tap lines parties to the record with which they respectively joined. The Prescott & Northwestern and the Ouachita & Northwestern were both

parties to the record. The two paragraphs of the order following this requirement were these:

Provided, That the allowances, or divisions out of such joint rates to be paid by the said principal defendants, respectively, to the said parties to the record on lumber and forest products shall not exceed the amounts hereby fixed as maximum allowances or divisions thereon until further order, the commission finding upon the record that any allowances or divisions in excess thereof result in undue preferences and unjust discriminations, and are unlawful.

It is further ordered, That the allowances or divisions out of the rates on interstate shipments of lumber and forest products from points on the lines of the above-named parties to the record shall not exceed the following amounts, namely: For switching a distance of 1 mile or less from the junction, \$2 per car; over 1 mile and up to 3 miles from the junction, \$3 per car; on shipments from points over 3 miles and not more than 6 miles from the junction, $1\frac{1}{2}$ cents per 100 pounds; over 6 miles and not more than 10 miles from the junction, 2 cents per 100 pounds; over 10 miles and not more than 20 miles from the junction, $2\frac{1}{2}$ cents per 100 pounds; over 20 miles and not more than 30 miles from the junction, 3 cents per 100 pounds; over 30 miles and not more than 40 miles from the junction, $3\frac{1}{2}$ cents per 100 pounds; over 40 miles from the junction, 4 cents per 100 pounds.

On April 7, 1919, the commission entered a fifth supplemental order, effective June 1, 1919, increasing these maximum divisions as follows:

For switching a distance of 1 mile or less from the junction, \$2.50 per car; over 1 mile and up to 3 miles from the junction, \$3.50 per car; on shipments from points over 3 miles and not more than 6 miles from the junction, 2 cents per 100 pounds; over 6 miles and not more than 10 miles from the junction, $2\frac{1}{2}$ cents per 100 pounds; over 10 miles and not more than 20 miles from the junction, 3 cents per 100 pounds; over 20 miles and not more than 30 miles from the junction, $3\frac{1}{2}$ cents per 100 pounds; over 30 miles and not more than 40 miles from the junction, 4 cents per 100 pounds; over 40 miles from the junction, $4\frac{1}{2}$ cents per 100 pounds.

If, then, divisions may lawfully be based upon the out-of-line haul described, the Prescott & Northwestern should now receive 3.5 cents per 100 pounds out of the through rate for hauling carloads of lumber from Prescott to Tokio, and the Memphis, Dallas & Gulf a further division for its haul from Tokio to Nashville, the Missouri Pacific receiving the balance for its haul from Nashville through Prescott to final destination.

Upon a standard carload of 60,000 pounds, the division paid to the tap line would thus equal \$21 per car, without allowing for the further

amount paid to the Memphis, Dallas & Gulf. On the other hand, if the car were delivered by the tap line direct to the Missouri Pacific at Prescott, the Prescott & Northwestern would receive but \$2.50 per car, and the balance of the through rate would be received by the Missouri Pacific for a haul to destination 40 miles shorter than it would be required to perform in the former case. The out-of-line haul in that case, aggregating 76 miles in all, is entirely unnecessary, and the only reason for it is to increase the earnings per car of the tap line.

The situation is similar in the case of the Ouachita & Northwestern, where the car returns to the station at which the traffic originates. Thus a car moves from Clarks to Standard on the tap line, a distance of 10.5 miles, and is there delivered to the Missouri Pacific; it then is returned to Clarks and thence moves to destination. Traffic originating at Standard is delivered by the tap line to the Missouri Pacific at Clarks, whence it is hauled to the south through Standard by the latter company. Such movements are wholly wasteful; they do not advance the traffic on its journey nor constitute any necessary part of the transportation from the point of origin to the point of destination. The tap line would be allowed for this useless 10.5-mile haul between Clarks and Standard, on the present mileage basis, 3 cents per 100 pounds or \$18 per standard car, shrinking the receipts of the line carrier \$15.50 per car and imposing upon it also an additional and unnecessary haul of 10.5 miles.

The Missouri Pacific and the other trunk lines in the territory in question are now under Federal control, and it is our understanding that the wasteful practices described above have been abandoned for the time being. The joint tariffs providing for these roundabout routes, however, are still in force, and when Federal control ceases, the former practices may be resumed. Under the circumstances, we feel that we ought not to allow the situations developed in connection with this proceeding to go without comment, or to omit to state the interpretation, so far as it affects such situations, which we place upon our orders of July 29, 1914, and April 7, 1919.

A tap line is entitled only to just compensation for the actual and reasonably necessary services performed by it as a part of the transportation of the traffic from point of origin to destination, and our orders relative to divisions out of the through rates were framed upon this principle in conformity with the decision of the Supreme Court already mentioned. The validity of the order of July 29, 1914, was in all respects sustained in *O'Keefe v. United States*, 240 U.S., 294. The out-of-line hauls above described are entirely unnecessary, cannot reasonably be considered a part of the service for which the through rates are intended to compensate, result in undue prejudice to tap lines and their proprietary companies which are not so situated that they can resort to similar practices, and unjustly deplete the revenues of the trunk line.

A somewhat similar situation was considered in *Louisiana & Pine Bluff Divisions*, 40 I.C.C., 470, where it was held that an out-of-line

or diverted movement to a track scale may not be included in computing the distance, under our order of July 29, 1914, upon which the division that a tap line may receive is to be determined, and this decision was recently affirmed upon reargument in *Louisiana & Pine Bluff Divisions*, 53 I.C.C., 475. As was stated in the original report in that case:

Were we to lend our approval to any such arrangement not only would the Pine Bluff be placed in a more advantageous position than any other tap line in this territory performing a similar service, but such a ruling would open the way in the case of many tap lines for a relocation of their track scales so as to require a long back haul, and in that way to lay a basis for divisions or allowances very materially in excess of those fixed by the commission for the distance covered by a direct movement from the mill to the junction.

By the same reasoning we conclude that the distances from the junctions which are determinative of the maximum divisions that the Missouri Pacific Railroad may lawfully pay, under our orders of July 29, 1914, and April 7, 1919, to the Prescott & Northwestern Railroad Company and to the Ouachita & Northwestern Railroad Company out of the through rate on interstate shipments of lumber and forest products from points on their lines must be measured by the direct route of movement toward final destination, rather than by out-of-line movements of the character in question.

COMMENTARY: This case illustrates the persistence, even as late as 1918, of one of the evil effects of railroad competition which is still extremely difficult to prevent. The law seeks to establish equality of treatment as between shippers; but the latter continue to play one carrier against another and to secure advantages which are contrary to the principle of equality of treatment on which the antidiscrimination clauses of the Interstate Commerce Act are based. Thus, in this case the railroad did not haul the traffic via the roundabout route because it wanted to, but rather because a shipper owning a tap line or industrial railroad connecting with two carriers could play the latter, one against the other, to secure advantages. Only a vigorous enforcement of the law, such as that illustrated in this case, can prevent such practices. By themselves the carriers are helpless.³

March, 1927

H. B. V.

³ The reasons for this helplessness—the economic peculiarities of the railroad business—were well explained in the 80's by President Arthur T. Hadley in his *Railroad Transportation*, now out of print; they are discussed also in the commentator's *Railroads: Rates, Service, Management* (written with Mr. Kenneth F. Burgess, General Solicitor of the Chicago, Burlington & Quincy Railroad), pp. 84-102, chap. vii, on the "Economics of Rate Making."

DEERBROOK RAILROAD¹

RAILROAD RATES—*Request for Reduction Granted.* Because of competition, a railroad allowed a lower rate on sand shipped to a particular market from five sources located in a small area than on that shipped from one other source located in the same area. A sand and gravel company supplied from the latter source asked that the commodity rate applying to the other sources be applied to that source also, as the existing sixth-class rate made it impossible for the company to compete in the market involved. The railroad granted the request because the reduction would not disturb other rates and would bring the line added traffic.

(1924)

The source of supply for the Jenkins Sand and Gravel Company¹ was located at Laurel in an eastern state. The company marketed its sand in Adamson, which was 50 miles north of Laurel, and in the manufacturing district north of Adamson. Rockvale, an important industrial city in that district, was a market for sand. The Jenkins Sand and Gravel Company was unable to sell its product in Rockvale, however, because the freight rate on sand from Laurel to Rockvale was higher than the freight rates paid by its competitors, many of whom were located farther from Rockvale than was the company. The lower rates gave the competitors an advantage in the Rockvale market which the company could not overcome.

Rockvale, Laurel, and the localities from which most of the Jenkins Sand and Gravel Company's competitors shipped their sand were on the Deerbrook Railroad, as indicated by the map in Exhibit 1. Rockvale was 162 miles from Laurel. The freight rate on sand from Laurel to Rockvale was 26 cents per 100 pounds, the regular sixth-class rate. From Roberts, where one of the Jenkins Sand and Gravel Company's competitors was located, to Rockvale the rate was \$2.25 per net ton² on glass, engine, foundry, moulding, and silica sand, and \$2.05 per net ton on other kinds of sand, although Roberts was only one mile nearer Rockvale than was Laurel.

¹ Fictitious name.

² "Net ton" is used in railroad tariffs to designate a ton of 2,000 pounds.

In 1924 the Jenkins Sand and Gravel Company asked the Deerbrook Railroad to allow on sand from Laurel to Rockvale the rate that applied from Roberts to Rockvale, in order that the company might market its sand at Rockvale in competition with

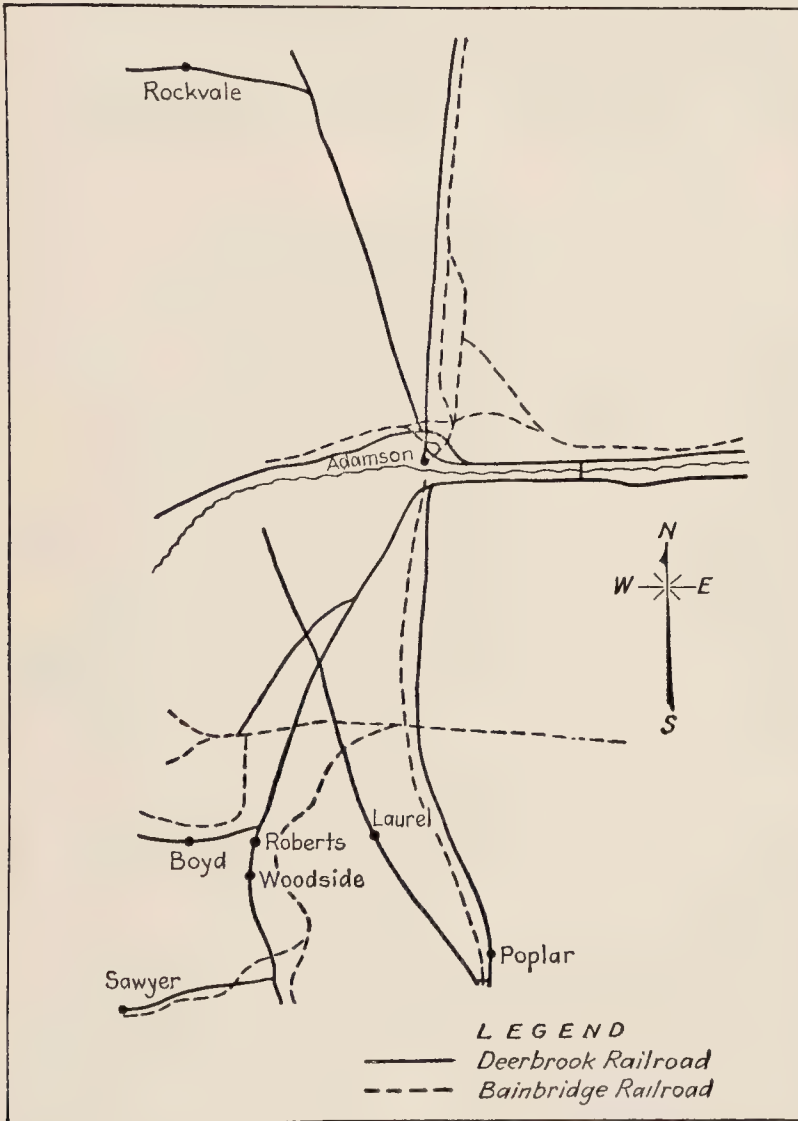


Exhibit 1: Area served by Deerbrook Railroad.

other companies located in the same region. The Deerbrook Railroad, upon receiving this request from the Jenkins Sand and Gravel Company, drew up the rate table shown as Exhibit 2.

All stations shown in the table except Sawyer were served only by the Deerbrook Railroad. Sawyer was on a line of the

EXHIBIT 2

RATE TABLE OF DEERBROOK RAILROAD

From	To	Miles	Existing (6th-class) Rate	Requested Rate	Existing (Commodity) Rate
Laurel.....	Rockvale	162	\$.26 per 100 lbs.	\$2.05-\$2.25 per net ton	
Roberts.....	"	161	.....	.....	\$2.05-\$2.25 per net ton
Boyd.....	"	166	.....	.....	"
Woodside.....	"	168	.....	.....	"
Sawyer.....	"	197	.....	.....	"
Poplar.....	"	167	.....	.....	"

Bainbridge Railroad,³ which from Adamson to Sawyer paralleled the line of the Deerbrook Railroad at a distance of a few miles. The rate from Sawyer to Rockvale, although the distance between the points was from 29 to 36 miles greater than that between Rockvale and any other of the stations listed in the table, was made as low as the rate from the other stations because of the competition between the two railroads.

Roberts, Boyd, Woodside, Sawyer, and Poplar were on other lines of the Deerbrook Railroad than that on which Laurel was located, and were within a few miles of some branch of the Bainbridge Railroad. Sand was plentiful in that district, and it was possible for a sand and gravel company to locate on the railroad which afforded the cheapest means of reaching the markets. The rates of \$2.05 to \$2.25 per net ton were competitive rates quoted by the Deerbrook Railroad to hold the traffic on its own line.

Laurel, on the other hand, was at least 10 miles from any branch of the Bainbridge Railroad. Traffic originating in the vicinity of Laurel was not competitive, but moved only over the Deerbrook Railroad. If it did not grant the request of the Jenkins Sand and Gravel Company for a lower rate to Rockvale, the Deerbrook Railroad was not likely to lose any of the sand and gravel traffic from Laurel to Adamson.

No sand was being moved from Laurel to Rockvale, because of the high freight rate. If the railroad granted the request of the Jenkins Sand and Gravel Company for a commodity rate to

³ Fictitious name.

Rockvale, that company would be able to compete with other companies in marketing sand at Rockvale, and the Deerbrook Railroad would obtain additional traffic. The granting of the commodity rate from Laurel to Rockvale would not disturb the rates on sand from Laurel to Adamson and other points, and, therefore, would not operate to reduce the revenue of the railroad.

The Deerbrook Railroad decided to grant the request of the Jenkins Sand and Gravel Company for a commodity rate on sand from Laurel to Rockvale.

COMMENTARY: In this case the Deerbrook Railroad had a practical monopoly in handling sand from Laurel, one of the producing points in a region which abounded in sand. At nearly all of the other producing points the Deerbrook Railroad was in competition with the Bainbridge Railroad, and the rates from those points to the principal markets at Adamson and Rockvale were competitive. The history of the rate development is not given, but it is likely that one of the two roads originally had the traffic to Rockvale at regular sixth-class rates and the other, in order to capture the business, named a lower commodity rate which was quickly met by its competitor. Laurel, being a noncompetitive point, was not given the commodity rate and the sand producer there had not made an effort to reach the Rockvale market until 1924, when its traffic manager, either on his own initiative or in response to a request from the sales manager, took steps to have the unfavorable discrimination removed.

The natural inclination of the Deerbrook Railroad would be to hold to the normal class rates from noncompetitive points when such rates in themselves were reasonable, but in this case the discrimination was clear and could hardly be justified wholly by the absence of competition at Laurel. Besides, the danger of disturbing other rates, competitive and noncompetitive, seemed to be remote, and if a commodity rate from Laurel to Rockvale, uniform with the competitive rate from Roberts and other near-by points, were granted, it might mean that the Deerbrook Railroad, by stimulating the movement of sand from Laurel to Rockvale, would enjoy a larger share of the total sand tonnage to Rockvale. The sand from Laurel could move only over the Deerbrook rails while that from Roberts and other near-by points would be shared with the Bainbridge Railroad. It is not surprising, therefore, that the Deerbrook Railroad granted the request for the lower rate from Laurel.

The case illustrates the principle that a railroad ordinarily tries to protect and foster the industries local to its lines.

February, 1929

W. J. C.

CINCINNATI NORTHERN RAILROAD COMPANY, *et al. v.*

PUBLIC UTILITY COMMISSION OF OHIO¹

RAILROAD OPERATION—*Discontinuance of Unprofitable Line.* A line on which four trains carried passengers, mail, and express was operated as a joint service by two railroad companies. Because the line was being operated at a loss, the railroad companies applied to the Public Utility Commission for permission to discontinue it. The commission decided that because the railroads as a whole showed a satisfactory profit and the service in question was necessary for the proper industrial development of the communities served, the service must be continued. When the decision was appealed, the Supreme Court of Ohio held that, since the services could be furnished by trucks or busses and since the companies sustained an actual operating loss on the line, the value of the service to the public was not sufficient for its continuance, and reversed the commission's order.

(1929)

In 1928, the Cincinnati Northern Railroad Company applied to the Public Utility Commission of Ohio for permission to discontinue four trains carrying passengers, mail, and express between Cincinnati, Ohio, and Jackson, Michigan. This was a joint service, operated by the Cincinnati Northern Railroad Company from Cincinnati to Franklin, a junction point in Ohio, and by another railroad company from Franklin to Jackson, on which the companies showed an actual out-of-pocket loss of \$30,000 for the first four months of 1928. After hearings the commission decided that because the railroads as a whole showed a satisfactory profit and the service in question was necessary for the proper industrial development of the communities served, the service must be continued as necessary for the public welfare.

On appeal, counsel for the company argued that, although it was showing a satisfactory profit on its operations as a whole, it should not be required to operate the four trains at an actual out-of-pocket loss, in view of the fact that the same service could be rendered by truck. The company further contended that, as the mail and express were carried by private contract, the

¹ 165 N. E. 38, 1929. Supreme Court of Ohio. January 23, 1929.

service performed was not a public service which the company could be compelled to render.

The court held first that mail and express were carried for the benefit of the public and therefore must be considered as a part of the service rendered, saying in part:

So long as these utilities continue to be common carriers they are subject to the jurisdiction of the commission, whether they operate under scheduled rates or whether they carry mail and express under so-called private contracts; so long as they do carry mail and express the carriage is for the benefit of the public, and the emoluments received therefrom may be considered as a component part of their earning power. In this case had the earnings derived from mail and express been sufficient to sustain the entire business of carriage as a whole over the line in question, it could not be urged by the companies that they were operating at a loss.

The court further held that since the services could be furnished by trucks or busses and since the companies suffered an actual operating loss of \$30,000 in four months, the value of the service to the public was not sufficient for the continuation of it. The commission's order was reversed.

COMMENTARY: In order to make a conclusive decision in this case, more detailed information is necessary, but the underlying principle is simple. It appears that the service which the commission ordered continued involved an actual out-of-pocket loss of \$30,000 under conditions where there was competition by substitution, as the services could have been rendered by trucks or busses. The loss involved was therefore the result of this potential competition, and the order of the commission was tantamount to ordering the companies to furnish free service to these customers to the extent of \$30,000. Clearly the value of this service was less than its cost, and if it were abandoned, some other service could have been rendered in its place which was worth more than its cost, or if not, the prices charged to other customers for other services could have been reduced. This action would have increased the profits of the other customers and might have resulted in an increase in their use of the service. Either way the order of the commission that the losing service must be continued was depriving other customers of some profit and therefore confiscating their property. The property of the railroad companies may also have been confiscated. The decision of the court is sound, although not well expressed.

March, 1929

P. C.

WAPELLA RAILROAD¹

RAILROAD—NITROCELLULOSE

RAILROAD OPERATION—*Diversion of Shipment over Connecting Carriers.* A railroad acting as the initial carrier for a shipment of six carloads of wet nitrocellulose, received, on the day following shipment by the manufacturing company, a request for diversion of the shipment at a point on the line of a connecting carrier. The railroad's transmission of this request to agents of several of the connecting lines was not received in time for the shipment to be diverted before it arrived at its original destination. When the railroad refused to refund the additional amount paid by the company for freight charges, the company appealed to the Interstate Commerce Commission. The commission ruled, however, that the railroad had fulfilled the requirements of its tariff and had exercised due diligence in transmitting the request, and that failure to divert had been due solely to the rapid movement of the shipment, which had moved under special orders of the War Department.

(1918)

The Franconia Company was engaged, during 1918, in the manufacture of explosives for the United States Government. On November 12, 1918, the company shipped six carloads of wet nitrocellulose from Carberry on the Wapella Railroad to Varcoe on the Arlberg Railroad, a distance of approximately 430 miles. The shipment was routed as follows:²

Wapella Railroad to Wapella
Kiowa Railroad to Coldwell
Ravanna Railroad to Creston
Everton Railroad to Walford
Fairview Railroad to Thessalon
Letona Railroad to Kemnay
Bartley Railroad to Oconto Junction
Oakmont Railroad to Buchan
Arlberg Railroad to Varcoe

At 2:30 p.m. on November 13, 1918, a member of the traffic department of the Franconia Company telephoned a request to

¹ Fictitious name.

² The names of railroads and towns used throughout the case are fictitious.

the railroad agent at Carberry that the six cars be diverted to Postell on the Hensley Railroad and that the routing be changed accordingly from Carberry to Postell. The changed routing would be the same as that given above as far as Walford, but from Walford would follow the Daggett Railroad to Chechaw, and the Hensley Railroad to Postell. Exhibit 1 shows the original routing of this shipment and the routing later requested.

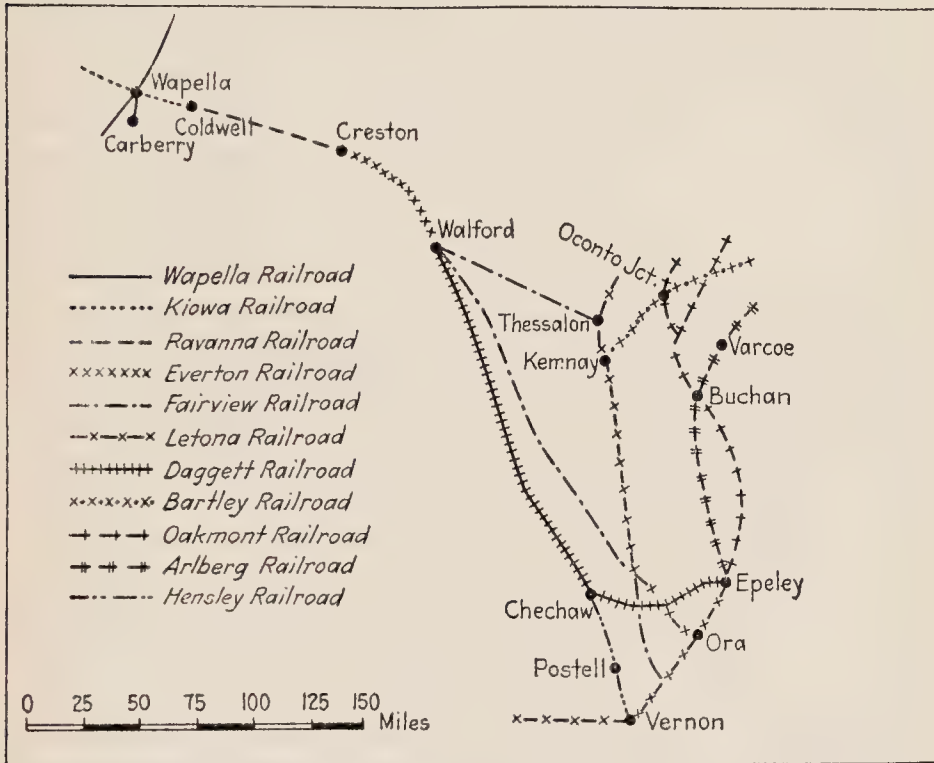


Exhibit 1: Railroad lines involved in shipment made by Franconia Company from Carberry to Varcoe.

At 4:20 p.m. on November 13, the agent at Carberry telegraphed the request to the general freight agent of the Wapella Railroad at Kincaid, 175 miles north of Carberry, to which office requests for diversions customarily were sent. The telegram was received at the telegraph office in Kincaid after office hours and was delivered on the morning of November 14. At noon of that day, the general freight agent of the Wapella Railroad wired the agent of that railroad at Wapella and also the agents for the Kiowa Railroad and the Ravanna Railroad at Coldwell, requesting the diversion. At that time, the general freight agent also sent

a similar notification by mail to the Fairview Railroad at Walford. The agents to whom he telegraphed replied that the cars had left their lines prior to the receipt of the request. The records of the Ravanna Railroad showed that the Wapella Railroad's telegram was received at Coldwell at 4:05 p.m., November 14, and that it was repeated to the Coldwell yard master and to the Creston yard master.

The general freight agent of the Wapella Railroad was advised on November 15 that the cars had left the Creston yard over the Everton Railroad before the request for the diversion was received. He then requested the Everton Railroad to make the diversion, but was advised by that company that the cars had been delivered to the Fairview Railroad at Walford on November 15, before receipt of the request. The general freight agent of the Wapella Railroad promptly telegraphed the Fairview Railroad and the Letona Railroad, requesting the diversion and stating that the cars had been delivered to the Fairview Railroad. He also notified the Fairview Railroad of the steps which had been taken to effect the diversion. The records of the Fairview Railroad showed that four of the six cars were received from the Everton Railroad at 10:00 a.m., November 15. The other two cars were received the same day, but the exact hour was not shown.

The requests for diversion did not catch up with the cars, and the shipment arrived at Varcoe without having been diverted. The Franconia Company, consequently, had to pay the full rate on the six carloads of freight from Varcoe to Postell, in addition to the full rate from Carberry to Varcoe, plus a reconsignment charge of \$2 per car. A joint commodity rate of 60.5 cents per 100 pounds applied from Carberry to Varcoe; the distance was 426.6 miles. A joint first-class rate of 37.5 cents per 100 pounds applied from Varcoe to Postell. The through commodity rate from Carberry to Postell was 55.5 cents per 100 pounds; the distance was 434.6 miles. The difference in the amount actually paid in rates by the Franconia Company, less \$12 for reconsignment, and the amount the company would have paid had the diversion been made as requested was \$1,730.02.

The Franconia Company attempted to obtain a refund of \$1,730.02 from the Wapella Railroad. The company held that the railroad had been negligent in forwarding the diversion order and had not used reasonable discretion or employed reasonable meas-

ures in an effort to comply with the company's request. For instance, the Wapella Railroad had telegraphed its own yard at Wapella, which was only nine miles from the point of origin of the shipment, and had sent notification by mail to the Fairview Railroad at Walford instead of telegraphing to the Everton Railroad or the Fairview Railroad. It was the belief of the traffic manager of the company that if the railroad had telegraphed at that time to the Everton Railroad or the Fairview Railroad, the diversion would have been effected.

The railroad refused to grant the refund, contending that immediately upon receipt of the request for diversion it had made every reasonable effort to divert the cars and had done even more than the tariff provisions required.

Rule 4 of the Wapella Railroad tariff effective when the shipment moved provided that:

When diversion or reconsignment is requested after shipment has passed out of possession of this railroad or when request is received too late for this railroad to effect the change desired, such request will be transmitted to direct connecting carrier to which shipment was delivered, when the responsibility of this railroad will end; and the shipments will be subject to rules of the carrier on whose rails the diversion or reconsignment is accomplished.

The company was not satisfied that the railroad had taken the proper steps to effect the diversion, and decided to take the case to the Interstate Commerce Commission. In its complaint, the company alleged that as far as Walford the original routing and the changed routing requested were identical, and that inasmuch as the carriers to that point were being operated by the United States Government under the Director General, the agent of the Wapella Railroad was the agent of the Director General, and as such it had been his duty to telegraph the request for diversion to the agent at Walford.

The railroad contended that, in view of the hundreds of messages which had to be sent over railroad wires and the need for preferred handling of train messages and dispatchers' messages, the diversion request had been transmitted with due diligence and reasonable promptness; that it would have been impracticable for the Wapella Railroad at the time that it telegraphed to the Kiowa Railroad and the Ravanna Railroad to have tele-

graphed the other participating carriers, because the diversion clerk had not been informed as to how far the routes to the original destination and to the reconsigned destination were common, and that to require him to investigate each case to develop that fact would interfere seriously with his work. The railroad also explained that a railroad tracing clerk frequently had no record of a car mentioned in a telegram and had to send for the information. The records of the car record office necessarily were from 10 hours to 12 hours behind the current movement of cars, because of the multitude of those movements.

The Interstate Commerce Commission dismissed the complaint. In its decision, the commission stated that wet nitrocellulose was moved quickly because it was highly inflammable and was used in the manufacture of explosives; that the shipments in question had moved under special orders of the war department; that the Wapella Railroad did all that its tariffs required it to do and also took the precaution, because of the short hauls of its connections to Creston yard and the known dangerous character of the commodity, to wire each of those connections in an effort to comply with the company's request; and that the failure to divert was due solely to the rapid movement of the shipments.

The commission stated further that while it was true that the railroads involved were being operated under governmental control, it was not the purpose of the Federal control act or of the orders of the Director General in operating under that act to alter or nullify the rates and other provisions of the existing lawful tariffs. On the contrary, except for the naming of certain officials with a view to effecting economies in the supervision and operation of the various activities of the carriers, the traffic and operating entities of the individual lines were maintained during the period of Federal control distinct from those of other lines, and the tariff provisions of the individual lines were observed. The fact that the tariff provision under consideration was not eliminated when the tariff was reissued under Federal control was convincing evidence that the purpose of the Director General was to operate the Wapella Railroad in accordance with the provisions of that tariff rule. It was clear from the record that the railroad had exercised due diligence in performing what it undertook to perform under the published tariff rule. No attack had been made upon the reasonableness of the tariff rule.

COMMENTARY: This case illustrates the difficulties surrounding the practice of diverting a freight car by changing routing and destination after it has started on its journey. The normal number of diversion orders on certain kinds of freight is substantial and requires a special organization in the traffic and operating departments. Such orders ordinarily are handled as a matter of routine and as a convenience or service to the shipper. The charge is nominal and is not considered by the railroads as compensatory. A reasonable effort is made to effectuate the order, but if the time is not ample for the repetition of the telegraphic instructions, there is an occasional failure.

In this case there appears to have been an unusual delay in acting upon the shipper's request and an unusually quick movement of the six cars. Cars loaded with high explosives are given preferred attention. The telegrams in this case were not handled so quickly as the explosives. Technically the railroads met their tariff obligations and the Interstate Commerce Commission dismissed the complaint; nevertheless, there was too much delay and not enough foresight in the action of the railroad traffic department. It must be remembered, however, that this incident occurred a day or two after the Armistice was signed, when a reaction from the heavy strains of war traffic demands had just set in.

January, 1927

W. J. C.

NEW YORK, NEW HAVEN AND HARTFORD RAILROAD COMPANY

ADVERTISING—*Advertising Special Train Service to Totality Zone at Time of Sun's Eclipse.* In an effort to secure extra passenger traffic, a railroad, at the time of the total eclipse of the sun in January, 1925, offered special train service at reduced rates from cities outside the zone of totality to points within it. The railroad advertised the special service by means of newspaper insertions, posters, pamphlets, and circular letters.

(1925)

On Saturday morning, January 24, 1925, a total eclipse of the sun was to be visible in a belt approximately 100 miles wide extending from eastern Minnesota through western New York, southern New England, and into the Atlantic Ocean. The southern limit of the zone of totality passed through the upper part of New York City and the northern limit passed just south of Pittsfield, Springfield, and Providence. The central New England points within the zone were New Haven, Hartford, and New London, but conditions would be favorable also at Stonington and Westerly. The latter city was located on the boundary line between Connecticut and Rhode Island.

During the three or four months preceding the eclipse, newspapers made frequent reference to the coming event and gave space to articles by and interviews with astronomers or others interested in the scientific aspects of the solar phenomenon. There seemed to be much public interest in the subject, and in cities which were outside the zone of totality, such as Boston, the press occasionally suggested that the wonderful spectacle would justify the time and the expense of a trip into the zone of totality.

During the latter part of December, the traffic officers of the New York, New Haven and Hartford Railroad Company began to consider operating special train service from points outside to points within the zone. It was difficult, however, to determine whether or not interest in the event would be sufficient to warrant the operation of special trains. In an effort to gather fairly precise information as to the degree of public interest in the



Interesting Important Information

On the Greatest
Spectacle of the Age

TOTAL ECLIPSE of the SUN

Saturday, January 24, 1925

The New York, New Haven and Hartford Railroad Company
E. C. COLEY,
Passenger Traffic Manager
New Haven, Conn., January 15, 1925.

Business Men

Make arrangements for your employees to see the totally eclipsed sun. The Solar Eclipse, coming once in centuries, is a sight which can be viewed to the best advantage at selected points to which The New York, New Haven and Hartford Railroad Co. will operate special trains. Your workers will profit by this matchless sight.

Teachers and Scientists

Enroll friends, pupils and associates to view and study this spectacle. The fleeting moments within the totality region, when the eclipse may be seen, are made accessible by the special trains of the New York, New Haven and Hartford Railroad Co.

Mothers and Fathers

Parents of children of high school age should make it possible for them to see the eclipse. These men and women of the future should view the eclipse for the information of future generations.

Special Trains

BOSTON AND WESTERLY
PITTSFIELD AND NEW MILFORD
WORCESTER AND NEW LONDON

(See schedule on back page)

Special Trains

and

Reduced Round Trip Fares

Saturday, January 24

BOSTON AND WESTERLY			
	a.m.	a.m.	a.m.
Le. Boston	8:45	10:15	11:45
• Back Bay	9:00	10:30	12:00
• Attleboro	9:15	10:45	12:15
• Providence	9:30	11:00	12:30
• Back Bay	9:45	11:15	12:45
• Boston	10:00	11:30	13:00

REDUCED FARES

One Way Fare for Round Trip	
Boston	\$2.18
Back Bay	3.18
Attleboro	3.00
Providence	3.00

PITTSFIELD AND NEW MILFORD

	a.m.	a.m.	a.m.
Le. Pittsfield	8:15	9:45	11:15
• Lenox	8:30	10:00	11:30
• Lee	8:45	10:15	11:45
• Stockbridge	9:00	10:30	12:00
• Hoosac Falls	9:15	10:45	12:15
• New Milford	9:30	11:00	12:30

REDUCED FARES

One Way Fare for Round Trip	
Pittsfield	\$2.76
Lenox	2.40
Lee	2.25
Stockbridge	2.10
Hoosac Falls	2.10

WORCESTER AND NEW LONDON

	a.m.	a.m.	a.m.
Le. Worcester	8:15	9:45	11:15
• Webster	8:30	10:00	11:30
• New London	8:45	10:15	11:45

REDUCED FARES

One Way Fare for Round Trip	
Worcester	\$2.51
Webster	2.00

Exhibit 1: Outside pages of pamphlet issued by New York, New Haven and Hartford Railroad Company, advertising special trains to area of total eclipse of sun, January 24, 1925.

Do Not Miss Seeing the Total Eclipse

Valuable information compiled by Professors Ernest W. Brown and Henry Norris Russell, for the guidance of those viewing the eclipse

THOUGH scientists will be making studies of the solar eclipse, there is much that the layman can do to aid in the charting of the activities of these two bodies as the time of the eclipse arrives. All the equipment that is needed is a bit of smoked glass or a dark piece of exposed film, and perhaps a pair of binoculars. Connecticut, Rhode Island and a very small area in Massachusetts will fall within the Region of Totality as shown on the enclosed map.

Here a word of warning to the inexperienced may be in order. Do not tire your eyes by looking too long or too often at the relatively uninteresting partial phases of the eclipse. Do not look directly at the sun at all unless you have some kind of "dark glass" through which to look.

With the aid of such a dark glass the steadily growing nick in the upper right-hand edge of the sun will be worth watching as a prelude to the play.

By nine o'clock, when only a narrow crescent of the sun remains in sight, the country will take on a weird appearance. The light from the sun's edge is not merely fainter, but is different in color and quality. All the color values of the landscape become altered—usually in a most uncanny fashion.

The obscurity steadily grows. At two or three minutes before totality the moon's shadow comes into sight in the west, darkening all the sky and advancing with tremendous speed. The darkening of the western sky should be rapid and very striking.

This crowns the impression made by the strange coloring and the advancing gloom. No one who has seen it can doubt the ancient tales of battles, stopped in their highest heat by an eclipse. It really seems as if the sun had gone out, even that the world is coming to an end.

Do's and Don't's in Viewing the Eclipse

DO'S
Obtain dark places or a sun shield for looking at the sun.
Watch for dark rushing shadows from the west before darkness sets in.
Watch for the Corona—a fringe of pearly white light that appears only with the total eclipse.

DON'T'S
Do not look directly at the sun unless you have a dark glass or a dark exposed film.
Do not tire your eyes. Wait for the shadows, the darkness, the eclipse, and the Corona.

See schedule of special trains and reduced rates—Boston to Worcester; Worcester to New London; Pittsfield to New Milford—on the back page.

Even before the crescent of the sun has disappeared, stars will begin to be visible to those who are on the lookout for them, but it is not until the sun is totally obscured that any but the very brightest stars are seen. An observer who is familiar with the sky in this region will be able to detect a certain number of stars as soon as the sun is totally eclipsed, and though this is not a very good test for totality it is of interest to know just what stars can be seen during totality. Those who are not near the edge of the band of totality can give an idea of the total light furnished by the corona by telling what stars they were able to see. Not very far away from the sun there is a group of three planets close together which should be visible; namely, Jupiter, Venus and Mercury, and these should stand out brilliantly.

But the precious seconds of totality are too few to spend in alarm. The moment that the darkness sets in all eyes must turn toward the vanished sun. In a few seconds one realizes that it is not by any means pitch dark, but much more like a moonlight night. The sky is not black, but a deep slaty blue. It hangs the disk of the moon, slaty blue like the sky, and around the moon's edge shines that wonderful fringe of light which the astronomer has named the corona—The Crown of the Sun—and which he is willing to travel far to observe for the few minutes during which the sun is totally eclipsed, because it is at this time alone that the corona can be seen.

On the inner coronal ring, close to the dark moon, one or more solar prominences may appear, as brilliant red wisps of light which look like flames blown into all sorts of shapes by the wind. They look small to the eye, but often they are tens and even hundreds of thousands of miles high, big enough to surround the earth completely if it were anywhere in the neighborhood. At the coming eclipse—this being a year of few sunspots—it is not probable that the prominences will be large. Possibly some may be visible through an opera glass.

All too soon the short totality—lasting hardly more than two minutes at the most—will come to an end; and now is the time to watch for things which are better left unlooked at as the sun goes into the shadow, lest the observer's eyes be dazzled. Just before the end of totality the inner corona brightens perceptibly, then something far brighter, shining with a white, steely light, appears. This is not the sun itself, but its hot lower atmosphere—as becomes clear a second or two later, when the sun's surface, incomparably more brilliant, bursts forth. The air fills with light, drowning out the outer corona at once and the inner corona after a minute or so. The great spectacle is over!

Exhibit 2: Inside pages of pamphlet issued by New York, New Haven and Hartford Railroad Company, advertising special trains to area of total eclipse of sun, January 24, 1925.

eclipse, the passenger department circularized the company's agents and had representatives interview chambers of commerce, boards of trade, and similar bodies. The reports indicated that there was a possibility of extra travel from Boston. The railroad officials, therefore, decided to run a special train from Boston to Westerly and to sell round-trip tickets at the regular one-way rate of \$3.18 from Boston. The officers, however, were somewhat doubtful at the time as to whether the train would be filled to capacity.

Having decided to offer reduced rates and to run a special train, leaving Boston at 6:05 a.m., Back Bay at 6:10, Attleboro at 6:50, and Providence at 7:10, and arriving at Westerly at 8:10 a.m., approximately one hour before the time of the total eclipse, the railroad officers endeavored to arouse more interest in the trip by advertising. In addition to the customary newspaper advertisements, the company used posters and maps, and also prepared and distributed a folded pamphlet describing the phenomenon in nontechnical language. The outside of the pamphlet was as shown in Exhibit 1, and the inside pages as in Exhibit 2.

The officials made a special effort to place copies of this pamphlet and the following circular letter in the hands of instructors and students in the several educational institutions in the vicinity of Boston.

THE NEW YORK, NEW HAVEN AND HARTFORD RAILROAD COMPANY
CENTRAL NEW ENGLAND RAILWAY COMPANY
PASSENGER TRAFFIC DEPARTMENT

Boston, Mass., January 7, 1925

SPECIAL TRAIN TO VIEW THE ECLIPSE

The New Haven Railroad has received many inquiries concerning operation of a special train from Boston, Saturday, January 24, to provide an opportunity for viewing the sun's eclipse at some point in the territory of totality.

A careful study of the territory and discussion with the astronomical authorities at Harvard indicate that Westerly, Rhode Island, would be the most favorably located and conveniently accessible point that could be reached by a special train from Boston that same morning. A special coach train, therefore, will leave Boston at 6:05 a.m., stopping at Back Bay at 6:10; Attleboro 6:50; Providence 7:10; arriving Westerly at 8:10 a.m., in time to view the beginning of the eclipse; returning, leave Westerly at 9:40 a.m.

The Westerly Board of Trade will cooperate by furnishing a place of observation on high ground within ten minutes' walk of the station, and there is also a location immediately adjoining the station at Westerly, where the eclipse can be viewed under favorable conditions.

A special reduced rate will be made of one one-way fare for the round trip, or \$3.18 from Boston; \$2.03 from Attleboro; \$1.59 from Providence.

Tickets will be placed on sale January 12, at South Station, Back Bay Station, and Consolidated Ticket Office (67 Franklin Street), Boston, and also at the Attleboro and Providence station ticket offices. To insure accommodations, purchase should be made in advance.

Your cooperation in conveying information concerning this train to those likely to be interested in making the trip will be appreciated.

E. L. WILSON

Ass't. Passenger Traffic Manager

This advertising material called attention to the fact that one could make an early start on the morning of January 24, view the eclipse from a favorable location, and return to Boston by noon.

Inasmuch as those who expected to make the trip were advised to purchase tickets in advance, the railroad would have fairly definite knowledge of the number of cars and trains necessary. The response to the advertising was spontaneous and exceeded all expectations. The company sold out the first train quickly, then a second, and a third, until finally, after the sixth had been sold, the officials decided that it would not be wise to undertake a greater movement to Westerly because of the necessity of sufficient space between the trains. In order to space the trains properly and allow ample time for all the trains to reach Westerly before the total eclipse at 9:13 a.m., the railroad had to schedule the first train to leave Boston at 5:45 a.m. To schedule a train earlier would have been impracticable, because the subway did not open until 5 a.m., and it would have been difficult for residents in many parts of the metropolitan district to reach the South Station conveniently by other means of transportation.

The announcement that no more tickets to Westerly would be sold was accompanied by a statement that a special train, in sections if necessary, would be run from Boston over the Air Line to Willimantic, where conditions for viewing the total eclipse

would be nearly as favorable as at Westerly. The sale of tickets to Willimantic began a few days before the date of the eclipse, and it became necessary for the railroad to provide two trains. On the morning of the eclipse, visibility conditions were ideal, although the temperature was close to zero. At the last moment, many persons who had refrained from the advance purchase of tickets because of fear of cloudy weather attempted to join the excursionists, but were turned away, as every train was filled.

The New York, New Haven and Hartford Railroad Company had expected that the interest taken by Bostonians would spread to other cities and had advertised special service from Worcester to New London and from Pittsfield to New Milford. Two trains each were filled in Worcester and in Pittsfield.

In addition to the 12 extra trains for the general public, the railroad, in cooperation with other railroads, ran five trains for special parties of students from schools and colleges. The New York, New Haven and Hartford Railroad Company and the Boston & Maine Railroad cooperated in running two trains for Smith College from Northampton via Springfield to Wallingford; one train for Amherst College from Amherst via Springfield to Windsor; and one train from Mount Holyoke College via Springfield to Windsor. In cooperation with the Boston & Albany Railroad, the New York, New Haven and Hartford Railroad Company operated one train for Wellesley and Dana Hall from Wellesley via Worcester to New London.

The number of passengers carried on the 12 trains open to the public was 8,277. On the 5 special party trains the number was 3,251. The total number of passengers was 11,528, or 678 per train. The gross revenue from the sale of the special tickets was over \$28,300.

Inasmuch as the service was offered at a time of the day when there would be no interference with regular service, and inasmuch as the total round trip of each train was made within the standard eight-hour day for train crews, the trains, fully loaded in both directions, were operated at minimum expense and, even at the low rate of one-way fare for the round trip, were a profitable undertaking.

As a by-product, the railroad benefited by an increase in goodwill on the part of the communities affected by the influx of visitors. Westerly, in particular, was pleased by the advertising

opportunity, and both there and at New Milford the townspeople placed automobiles and trucks at the disposal of visitors to transport them to high ground for an uninterrupted view of the eclipse. At New Milford the visitors were served with hot coffee, doughnuts, and sandwiches, donated by the business men. Early in January, the Westerly business men had announced that similar refreshments would be served there, but when they learned later that the number of passengers would run into thousands they were obliged to withdraw the offer. On the trains from Boston the railroad's dining-car employees served coffee at 10 cents a cup and sandwiches at 15 cents to 30 cents each.

The New York, New Haven and Hartford Railroad Company's passenger traffic department assigned a representative to accompany each train. The entire movement was made without delay, accident, or confusion. The results, as viewed by the railroad, were gratifying, not only in respect of the additional net revenue earned but also in respect of the favorable publicity.

COMMENTARY: The functions of the passenger traffic department of a railroad include not only the solicitation of and transportation provision for the normal passenger traffic but also the creation of new traffic whenever an opportunity offers to suggest the idea of railroad travel to those who otherwise would not think of it. Fairs, expositions, sporting events, autumn foliage, winter carnivals, and the like, are ordinarily seized upon by the traffic department as traffic creating incentives, and special service, at regular or reduced rates, is advertised.

In this case there was no precedent. There never had been a total eclipse of the sun in the territory of the New York, New Haven and Hartford Railroad since the railroad was organized. The company had no criteria by which it could gauge the extent of public interest in the event. The passenger department officers, however, applied the principles of imagination in business, with results that were gratifying beyond expectation.

The case is of interest as an example of created passenger traffic of a constructive nature.

January, 1927

W. J. C.

LEHIGH VALLEY RAILROAD

PLANT MAINTENANCE—*Reduction in Annual Number of Tie Renewals by Railroad.* In a railroad company whose standard of maintenance required the removal of ties as soon as wear or decay became evident, the annual number of tie renewals per mile of track was high. If the number of tie renewals could be reduced, a saving would result not only in the expenditure for ties but also in the labor cost of placing them in the track. In order to offset in part the decay of ties, the company decided to have all new ties treated with a preservative before they were inserted; in order to reduce the element of wear, the company decided to increase the number of ties under each 33-foot rail of heavy-traffic track from 17 or 18 to 20, and, in addition, to use heavy tie plates on such track. After this policy had been in effect about 10 years, a decrease in the number of annual tie renewals per mile of track was noticeable.

(1910)

In 1910, the Lehigh Valley Railroad believed that it might be able to reduce its maintenance of way costs and at the same time improve its maintenance standards. Prior to 1910, the company had used only untreated ties in its roadbed. The standard of maintenance on the Lehigh Valley Railroad required the removal of ties as soon as wear or decay became evident; as a consequence, the annual number of tie renewals per mile of track was high. From 1898 to 1910, the number of ties inserted annually for renewals ranged from 155 to 336 per mile of track, although during the 5 years immediately preceding 1910 the number was not greater than 196 annually. If the number of ties required annually for renewals could be reduced, a saving would result not only in the expenditure for ties but also in the labor cost of placing them in the track.

The Lehigh Valley Railroad in 1910 operated approximately 1,300 miles of line, embracing 3,190 miles of track. The main line of the railroad extended between New York City and Buffalo, a distance of 447.6 miles. All of this line was laid with double track. The company had a number of relatively short branches in the anthracite region of Pennsylvania, many of which were double track, a number of longer branches in western New York, and also an important double track branch 9.6 miles in length to

Perth Amboy, New Jersey. The Lehigh Valley Railroad, although it provided both through and local passenger service of a high quality, was essentially a freight carrying line having anthracite coal for its principal commodity.

The company believed that, as a rule, railroad ties decayed rather than wore out, especially if tie plates were used, as was the practice on the Lehigh Valley Railroad. The volume of traffic was, therefore, a minor factor in the life of a tie. Climatic conditions, the drainage of the roadbed, and the kind of wood used for ties were more important factors. The company, after investigation, concluded that by treating ties with a preservative it could retard their decay.

In 1910, the average cost to the Lehigh Valley Railroad of ties for the main line was 57 cents each, and the average cost of inserting a tie in track was 25 cents. The average life of an untreated tie was 8 years. No reliable data were available at the time on the life of treated ties. Should the company decide to use treated ties, a commercial creosoting company would treat ties for the railroad at a cost of 40 cents per tie in a plant to be erected along the railroad line by the treating company. The cost to the railroad of a treated tie inserted in track would be, therefore, nearly 50% greater than the cost of an untreated tie. The railroad would have to make no additional investment in plant. The railroad estimated that the life of a tie would be prolonged much more than 50% by the creosote treatment, and, therefore, decided to have all new ties treated before using them.

Having decided to offset in part the element of decay by using treated ties, the company decided to offset in part the element of wear, although it was less important than decay, by increasing the number of ties under each rail. There were on the company's lines 17 or 18 ties under each 33-foot rail. The company decided to make 20 the standard in heavy-traffic track. In addition, heavy tie plates 8 inches wide were to be used as a further protection against the rail-cutting of ties by the passage of heavy trains. The ties which the railroad used in its heavy-traffic tracks were 8 feet long, 8 inches wide, and 6 inches thick. When renewals were made in branch tracks, the number of ties per rail was to be proportioned to the traffic, although in no case was the number to be reduced.

Beginning in 1910, the Lehigh Valley Railroad treated with creosote as high a percentage of the new ties laid as the supply of creosote oil permitted. Exhibit 1 shows the number of tie renewals in relation to the number of miles of track operated for the years 1898 to 1923 inclusive.

EXHIBIT 1

TOTAL TIE RENEWALS AND TIE RENEWALS PER MILE OF TRACK,
LEHIGH VALLEY RAILROAD, 1898-1923

YEAR ENDED	MILES OF TRACK (ALL KINDS)	TOTAL TIES INSERTED FOR RENEWAL*	TIES INSERTED PER MILE OF TRACK	FIVE-YEAR MOVING AVERAGE OF NUMBER OF TIES INSERTED FOR RENEWAL PER YEAR	
				Total	Per Mile of Track
Nov. 30, 1898	2,740.61	627,417	229		
1899	2,776.91	680,052	245		
1900	2,806.64	944,096	336		
1901	2,858.09	850,797	298		
June 30, 1902†	2,862.53	308,300			
1903	2,892.99	886,895	307	797,851	283
1904	2,911.33	614,273	211	795,223	279
1905	2,930.24	575,992	197	774,411	270
1906	3,060.42	475,620	155	680,715	234
1907	3,090.14	569,272	184	624,410	211
1908	3,157.77	544,934	173	556,018	184
1909	3,170.76	618,593	195	556,882	181
1910	3,190.71	544,747	171	550,633	176
1911	3,198.57	451,232	141	545,756	173
1912	3,244.96	534,413	165	538,784	169
1913	3,277.47	877,558	268	605,309	188
1914	3,312.58	770,679	233	635,726	196
1915	3,320.03	959,811	289	718,739	219
1916	3,383.53	968,403	286	822,173	248
Dec. 31, 1916‡	3,396.08	427,163			
1917	3,407.58	608,835	179	837,057	251
1918	3,395.87	589,997	174	779,545	232
1919	3,393.47	662,031	195	757,815	225
1920	3,398.86	395,414	116	644,936	190
1921	3,401.46	454,114	134	542,078	160
1922	3,412.92	263,342	77	472,980	139
1923	3,414.39	310,676	91	417,115	123

* Includes additional ties inserted in track where renewals were made, but does not include ties placed in new track.

† Seven months.

‡ Six months.

The effect of the company's policy did not become noticeable for a number of years after it was inaugurated. During the years 1913 to 1916 inclusive, the number of ties inserted per mile of track was high, principally because of the company's policy of increasing the number of ties per rail. From 1920 on, the number of annual tie renewals per mile of track was low in relation to the figures for previous years, being less than 100 in

both 1922 and 1923. The five-year moving average of tie renewals per mile of track declined steadily after 1917.

By 1924, the entire main line of the Lehigh Valley Railroad had been laid on creosoted ties. It was also rock-ballasted, both for permanence and to improve the drainage. By that year, 70% of the ties in all the tracks of the railroad had been creosoted. Fifty-six per cent of the main double-track line between New York City and Buffalo had been laid with 136-pound rail,¹ the heaviest rail then in use anywhere, which the road adopted in 1916 for its heavy-traffic tracks. The balance of the main line track was of 100-pound and 110-pound rail, but all new rail laid on that line after 1916 was of the 136-pound weight. The 100-pound and 110-pound rail released from the main line was used for renewals on branch lines.

The maintenance engineers of the Lehigh Valley Railroad believed that the load on the individual tie was relieved by the use of heavy rail, which distributed the load over more ties, and by the use of a larger number of ties in the roadbed to receive the load.

COMMENTARY: As this case reads, the inference is that the Lehigh Valley Railroad in 1910 introduced something new in cross-tie preservative treatment. Such, however, was not the case. Other railroads, notably in the Southwest, had been treating ties several years before 1910 but the practice was not then general on the railroads in eastern territory where climatic conditions were more favorable for ties. The reports of the Committee on Ties, American Railway Engineering Association, had been recording the extent of the practice, describing the several methods, and tabulating statistics which threw light on the comparative lives of treated and untreated ties.

The case is of value in the complete statistics showing track miles and tie renewals over a period of 27 years. The figures support the assertion that the effect of the new policy did not become noticeable until several years after it was inaugurated. The average life of the untreated tie under conditions of 1910 is not given, but if the former policy was to use 18 ties under each 33-foot rail, there were 2,880 ties per mile of track, and if the average yearly renewals from 1910 to 1914 were 196, the average life was 14.7 years, a rather high average. It is probable that the average on the heavy-traffic lines was substantially less. Using the same method for the five years ended with 1923, the yearly renewals of 123 ties per track mile, with 20 ties per rail (3,200 per mile), indicated an average life of 26 years.

¹ Weight of rail was denoted by the weight in pounds per yard.

The economic effect may be indicated in part by computing the cost per tie year using present costs. If an untreated tie now costs \$1, if the preservative treatment now costs 50 cents, and if the labor cost of inserting a new tie is now 50 cents, the total cost of an untreated tie in place is \$1.50 and of a treated tie \$2, and the yearly cost of 14.7 years' service of the untreated tie is 10.2 cents, while that of 26 years' service of the treated tie is 7.6 cents. This computation, however, neglects the element of interest on the investment and the favorable effects of heavier rail, tie plates, and closer spacing of ties. It is difficult, if not impossible, because of changes in other factors, to measure with accuracy the economic savings attributable solely to tie treatment, yet there is sufficient evidence in the case to prove that the policy, now generally adopted, is economically sound.

February, 1929

W. J. C.

WANDELL COMPANY¹

MANUFACTURER

TRAFFIC CONTROL—*Establishment of Traffic Department.* A company operating eight plants at which it manufactured a variety of products imported some of its raw materials and distributed its products throughout the United States. In order to eliminate freight overcharges, to secure satisfactory settlement of claims, and to avail itself of the most economical routing of its raw materials and its products, the company decided to establish a traffic department.

TRAFFIC ORGANIZATION—*Position of Traffic Department in Organization.* A manufacturing company which had decided to establish a traffic department made a study of the various functions the new department was to perform and of its relation to other departments. As a result of this study, it was decided to make the traffic department immediately subordinate to the company's chief executive rather than to the head of any existing department.

(1916)

Chief among the products made by the Wandell Company were gelatin, abrasive paper, glue, emery wheels, and soap. The company distributed its products throughout the United States, for the most part direct to consumers; it paid the freight charges on shipments to customers. The company operated eight plants: five in Massachusetts, two in Indiana, and one in California; the central office of the company was in Boston. In general, the production of the Massachusetts plants was distributed throughout the East and South, that of the Indiana plants as far west as the Rocky Mountains, and that of the California plant from the Pacific Coast inland to the Rocky Mountains.

In 1916, 10 years after it was organized, the company decided to establish a traffic department. The project was in the nature of an experiment. Whether the department was retained permanently was to depend primarily upon the amount of money which it saved for the company through the collection of refunds of overcharges on freight bills. In addition, the traffic department was expected to be of assistance to the other departments of the

¹ Fictitious name.

company. A careful study of the proposed organization of the department and of its relation to the other departments was made before it was installed.

Whole hides which for any reason were not suitable for leather, and the trimmings from hides which were used for leather, constituted the most important raw materials used by the Wandell Company. Both domestic and imported hides and bones were used. The company's plants were located primarily with reference to accessibility to the supply of hides, either in tanning centers or within short distances of the ports of importation, and secondarily with reference to proximity to markets. Three of the Massachusetts plants and both of the Indiana plants were located close to tanning centers. The other two Massachusetts plants used almost exclusively imported hides which were trucked from Boston. The California plant, although located at some distance from the port at which hides from Asia were received, was in the center of an excellent market for gelatin. All plants were on or near one or more railroad lines. Raw materials which arrived by rail came in carload lots.

Except for interplant shipments, nearly all the outgoing traffic of the Wandell Company was in less than carload lots. The proper routing and dispatch of outgoing freight were of more importance to the company than were the rates and routing of incoming freight. The number of outgoing shipments was larger than it would have been had shipments been made in carload lots, and the chances for mistakes in applying rates and in routing shipments were correspondingly greater. Quick delivery was necessary on many orders for the company's products.

The traffic department was to be concerned principally with rates and routes for outgoing traffic. The company intended to have the department file all freight claims and take whatever action was necessary on them, but it was not to be given credit for the amount collected in loss and damage freight claims. The company believed that it would receive that money whether it had a traffic department or not. The employees in the traffic department were to be available for consultation by members of the production department with reference to incoming materials and supplies, by members of the sales department with reference to rates and routes to new territory or alternate routes with better rates or service to existing markets, by the purchasing agent with

reference to transportation from existing or potential sources of raw materials and supplies, and by the management with reference to location studies for new plants.

Because the traffic department was to be related to various other departments and to no one more than to another, the company decided to employ a traffic manager and to make him directly responsible to the chief executive, rather than to place the department under the control of the head of an existing department. The traffic manager was to have his office in Boston, and his assistants there were to take care of all traffic matters relating to the Massachusetts plants. In addition, there was to be a subordinate in each of the three western plants to attend to routine traffic matters.

The traffic department of the Wandell Company was a success. In 1924, the freight overcharges refunded to the company through the efforts of that department exceeded \$30,000. The company had established an additional plant in the West since 1916, so that the traffic manager had four traffic clerks at western plants and three assistants at Boston, a total of seven men in the department. The members of the department were consulted freely upon all matters pertaining to rail or water transportation. The department operated practically without interference from the chief executive.

COMMENTARY: This case affords a good background for discussing the problem of fitting the traffic manager into the industrial organization. Whether he should be independent of other departments and report to the chief executive or whether he should be subordinate to the sales manager, production manager, purchasing agent, or treasurer depends upon many factors, and every case has its peculiarities, notably in official personnel. In this case the decision was to place the new traffic manager directly under the chief executive. According to the facts as given, the traffic manager might equally well have been placed under the sales manager, inasmuch as the transportation rates and service on finished products were highly important from the viewpoint of sales. There was little reason for subordinating traffic to production or purchasing, as the plants were so located as to be near the sources of raw materials. The vital transportation problems were in distribution of product.

Attention should be called to the overemphasis upon savings from collection of overcharges on freight bills. It is stated that the permanence of the traffic department would depend primarily upon

the amount of money thus saved. While the estimated saving of \$30,000 per year was substantial and presumably sufficient to pay the extra expense of the department, it would seem that the value of the services of the traffic experts in improving transportation service by rail, water, and highway was of major importance and sufficient in itself to justify the creation of a traffic department, regardless of whether the overcharge collections were or were not sufficient to finance the addition to the organization. The checking of freight bills may be done by an outside agency on a percentage basis without the creation of a new department, but the benefits of continuing expert traffic counsel on the many and constant problems of rates and service may best, in a concern of this size and character, be had within the organization. The facts as given here make a *prima facie* case for the employment of a traffic manager without considering the savings inherent in the more careful checking of freight bills. Too much emphasis upon these and other alleged savings by changes in rates, routes, packing methods, and the like, often leads to misdirected energy toward making a "paper" showing of profits, when the major benefits are in improvements, more or less intangible, but of real value in reducing production costs or increasing sales.

January, 1929

W. J. C.

HEYBOURN SHOE COMPANY¹

MANUFACTURER—SHOES

PURCHASING—*Purchasing Material in Advance of Needs to Assure High Quality.* Following the depression of 1920, the purchasing agent of a shoe manufacturing company adopted a policy of purchasing on a routine basis. In August, 1922, the purchasing agent learned that the 1920 crop of flax, from which the linen thread then being used by the company was made, would last only three months more. After that time the 1921 crop, which was reported to be inferior to the 1920 crop, would be used. Because he believed the quality of the thread to be a paramount consideration, the purchasing agent decided to place orders for a year's supply of linen thread, to be delivered monthly, in spite of the risk of declining prices and of increased carrying charges on inventories.

(1922)

Following the depression that occurred in the shoe industry in 1920, the Heybourn Shoe Company, which manufactured women's and children's high-grade shoes, placed a competent man in charge of the central manufacturing storeroom and of the purchasing of manufacturing stores. These did not include office supplies, which were bought by the office manager, or upper leathers, the purchase of which, because of volume and style changes, required the entire time of a specialist. The new purchasing agent, on account of the unsettled conditions in the shoe industry, the current changes in shoe styles, and the resultant policy of retrenchment emphasized by the management of the Heybourn Shoe Company, adopted a policy of purchasing on a routine basis. In August, 1922, he had to decide whether to continue purchasing linen thread on a routine basis or to contract for a future supply.

The storeroom and purchasing were separated completely from the control of the manufacturing departments. The latter placed requisitions with the storeroom for materials and were charged therefor on the stores department records. Beginning in January, 1922, the purchasing agent had kept logarithmic charts covering internal information of interest to him in pur-

¹ Fictitious name.

chasing, including figures for factory production, sales, orders from salesmen, and material on order. He also received sales and production estimates made by the management. In the store-room, he had installed binboards with tickler pegs. On the basis of records of material turnover, and through his knowledge of the delivery periods for orders, the purchasing agent had worked out a graduated system for ordering; when withdrawals brought the quantity in stock to a minimum point determined by the above information, the tickler peg was set as a warning to buy the necessary quantity. This system, however, was not inflexible. The purchasing agent used his judgment as to purchases, even if the quantity on hand was below the specified limit, since by waiting he frequently obtained a lower price.

In June, 1922, production of the Heybourn Shoe Company was approximately 3,500 pairs of shoes daily, of which 50% were welt-soled shoes. The linen thread used in the manufacture of a pair of shoes was less than 1% of the total cost. The thread required to sew uppers to welts was an eight-cord linen thread. It measured approximately 800 yards to the pound, and an average of three yards was required for one pair of shoes.

Linen thread was manufactured from flax raised in Ireland, Belgium, and Russia. In 1922, the Russian crop was used little in American production and most of the flax imported for this eight-cord thread came from Belgium. In Belgium, after flax was harvested in the fall it underwent processes consuming approximately eight months before it was exported. This Belgian method of preparation gave a fineness of quality such that American thread manufacturers contracted for more than a year ahead of requirements in order to assure continuity of supply. In July, 1922, the purchasing agent of the Heybourn Shoe Company learned from trade reports that the 1920 Belgian crop being used in current thread manufacture was practically exhausted and that the 1921 crop, then being marketed, had been less satisfactory and might make a weak thread. The thread made from the 1920 flax crop, however, was of exceptional quality.

The purchasing agent had made exhaustive tests of linen thread for tensile strength, for frictional wear, and for yardage per pound, and he realized that quality was a preeminent factor. A break in thread on the shoe machinery in the course of pro-

duction involved the ripping of uppers from welts with the possible destruction of welts as well as uppers, in addition to the extra time required for ripping and resewing. Poor wearing qualities discovered after the shoe was sold reflected on the reputation of the Heybourn Shoe Company. All shoes made by the company were sold under brands, and the quality of brands was maintained rigidly, in order that the purchaser of any brand might know exactly what to expect on a second purchase.

Production from the 1920 crop of flax, which was furnishing a desirable thread, might continue for another three months. After that time, the 1921 crop was to be used. Linen thread was generally considered a stock material. On a routine basis, each purchase of the Heybourn Shoe Company was one case of 168 pounds; below this unit, no quantity discounts were allowed by thread manufacturers. During the war period, the price of linen thread had increased; in June, 1922, it had been \$2.85 per pound. In August, 1922, the price had dropped to \$2.70 per pound, and at that time the purchasing agent of the Heybourn Shoe Company contemplated, instead of purchase in case lots, a contract at a guaranteed price for a year's supply, which would be made up and held by the thread manufacturer for delivery monthly over the ensuing year. By the purchase of a year's supply or by a contract for that quantity, the Heybourn Shoe Company could secure a dating of January 5, 1923, on bills covering deliveries during the remaining five months in 1922, although no additional discount for quantity could be secured.

During each six months' period of 1921 and during the first half of 1922, the company had used 1,000 pounds of eight-cord linen thread. Estimates by the company's sales department indicated a normal production for 1923. Since the spring of 1920, however, production in the shoe industry in general and particularly in the manufacture of women's shoes had been highly uncertain because of increasing change in styles. Purchase in advance of needs or a contract for future delivery was contrary to the general policy of the company and might leave on its hands either material or a contract for material which could not be used. In that event, a portion of the company's capital would be tied up in inventory that could not be liquidated.

Although linen thread represented but a small percentage of cost of the product, so that a marked change in price was not

likely to be reflected noticeably in the cost or in the selling price of the shoes, the total sum, approximately \$5,400, for a year's supply of 2,000 pounds was substantial. Capital so invested meant a loss of profits which could have been made by an equivalent investment in manufacturing. There was no question of deterioration of material on hand, however, for in warehouses properly humidified linen thread could be stored indefinitely without loss of quality.

Continuation of routine purchasing would release capital for active use, would allow the company to take advantage of possible fluctuations downward in price, and would reduce the risk of loss on possible changes in production and in style. In addition, a low inventory of linen thread would reduce such charges as government taxes on inventories, which would be incurred if the thread was not used as planned and remained in stock beyond the inventory period ending January 1, 1924. Moreover, it was not certain that the quality of thread from the 1921 flax crop would be as unsatisfactory as was estimated.

The purchasing agent of the Heybourn Shoe Company, because he believed the quality of thread was a paramount consideration in its purchase, decided in this instance to depart from his established policy of routine purchasing. He placed an order for 12 cases, of 168 pounds each, of eight-cord linen thread, at \$2.70 a pound, to be made up from the 1920 flax crop. One case was to be delivered each month, and the purchasing agent obtained a dating of January 5, 1923, on the invoices covering the first five months' deliveries.

Prior to the winter of 1922-1923, 50% of the shoes sold by the Heybourn Shoe Company had had welt soles. Welts were stitched to uppers and the soles then were sewed to the welts by outside stitching. During that winter, a demand for shoes with turned soles became apparent. Turned soles were stitched with the uppers inside out and then the uppers were pulled over to their final shape; a lighter thread was used than for welt sewing. In November, 1923, only about 30% of the company's production was of welt shoes. Consequently, the purchasing agent had in stock, at the end of the year covered by his contract, 1,000 pounds of linen thread. The market price at that time was \$2.60 per pound, after a gradual decrease.

COMMENTARY: While the losses incurred by reason of a decrease in price of linen thread and the carrying charges on all inventory in excess of needs point toward an error in purchasing policy in this case, it is believed that the decision of the purchasing agent to buy in advance of needs was sound. The risk of poor quality thread warranted forward buying with its attendant price risk, because quality of thread was a paramount consideration in the manufacture of shoes. The change to a different weight of thread was the reason for the unused inventory. The responsibility for the loss in carrying charges might well be placed with the general management, if anywhere, for failure to advise the purchasing agent with respect to possible changes in the type of shoes manufactured.

The case illustrates the use of forward buying as a means of protecting quality of material, and the effect of unsettled business conditions upon purchasing policy. An interesting fact is that while linen thread is relatively unimportant as an item of material cost, yet from the standpoint of administrative consideration it is fully as important as a primary material.

July, 1929

H. H. T.

HARPHAN MANUFACTURING COMPANY¹

MANUFACTURER—CALCULATING MACHINES

QUALITY CONTROL—*Inspection by Workmen Replaced by Regular Inspectors.*

When it was first established, a company manufacturing calculating machines had allowed its workmen to inspect their own work. With increased production, as a result of increasing demand for the product during the World War and of the installation of a bonus system, the existing method of inspection ceased to be effective. Although the expense of maintaining inspectors was expected to be greater than the loss from defective parts, the company decided to employ regular inspectors to examine all work, with the exception of those parts in which imperfections readily could be detected by the workmen.

For five years after its establishment, the Harphan Manufacturing Company, which manufactured calculating machines, had allowed its workmen to do their own inspecting. This method had been applicable during the developmental period because the operators were experienced men who desired to manufacture a satisfactory product in return for the considerate treatment they received. They were paid the current day rates for the class of labor performed. The product was assembled from over 2,000 parts. While the details of the machine were being perfected, the company had made no effort to speed up production, and the amount of defective parts produced was almost negligible.

During the World War, when the company was growing and the war boom was increasing demand for the calculating machine, the inspection system of the company ceased to be effective. Additional machinists had been employed in order to increase production and to replace the men drafted for war service. The newly acquired force was inferior in skill and morale to the original group of workmen. After a careful time study, a bonus system of payment was established. Under this system, the employees were inclined to disregard production standards and to pass faulty parts.

If the company's machine became known as unreliable because of faulty parts, a consequent slump in sales was inevitable. The

¹ Fictitious name.

company also believed that the time spent by the workmen in inspection could be used more advantageously in increasing production. It was proposed, therefore, that the company install a group of inspectors to examine the output of each operative.

It was likely, however, that the expense for inspectors under the new plan would be greater than the current loss from defective parts. Disputes were probable between the new, less conscientious employees and careful inspectors who insisted on maintaining standards. Some inspectors, moreover, might be willing to pass faulty output in return for a share of the worker's bonus. Although final inspection of an assembled machine was sufficient to reveal practically all defective parts, it was possible that parts with flaws in them might operate during the tests but break down under the stress of continued use.

The principal machines used in the shop were lathes, gear cutters, drills, pressers, and punches. The lathes and gear cutters had to be tended constantly. Close inspection which involved calipering or testing with limit gauges was necessary on the parts produced by these machines.

Since the pieces were drilled by the use of templates, there was no question as to the correct location of the holes; but on the calculating machine cases there was a countersinking operation, performed after drilling, that might be omitted by a careless workman. If this process was not performed, there was a tendency for the machines to shake to pieces after a few months' service. A thorough inspection, therefore, was necessary after this operation.

The punches, pressers, and several of the automatic machines, which were set by means of standard gauges, generally produced uniform parts. The output of these machines dropped into trays, which were emptied into the finished parts storeroom bins. Detailed inspection of these parts was not necessary, as a glance showed whether a part was perfect or broken. It was only necessary for a workman to pick any broken parts out of his tray before sending it to the storeroom.

The company decided it was unnecessary to employ regular inspectors for the detection of such broken parts. With this exception, it decided that, in order to maintain the quality reputation of the product, inspectors should be employed to examine all work. After this system of inspection was installed, there were practically no complaints about defective parts in the cal-

culating machines. Although manufacturing costs were raised by the inspectors' salaries, the company was convinced that the additional expense was justified by its customers' increased satisfaction with the machines.

COMMENTARY: Significant aspects of this case are:

1. Abnormal operating conditions, resulting from increased product demand with concurrent reductions of skilled labor force by the draft upon employees for war purposes.
2. The importance of operating reliability as a factor affecting the marketing of the product.
3. The recent installation of a bonus system of wage payment.

While the case as stated implies that inspection was a function only of the workmen, it is to be assumed that the influence of the foremen was likewise directed to the maintenance of quality and doubtless was found to be insufficient to prevent the increase in defective work.

A remedial measure might take the form of final inspection conducted by inspectors reporting to a chief inspector, who in turn would be subordinate either to the general manager, to the chief engineer, or to a works committee, while process inspection remained in the hands of the foremen. This plan is feasible only when the product is such as to reveal process defects at the time of final inspection.

An alternate method places process inspection as well as final inspection in the hands of functionalized inspectors. In view of the limitations upon a comprehensive final inspection, the importance of operating reliability, the abnormal manufacturing conditions, and the presence of the new bonus system, the latter course is recommended in this case.

The expense of such an installation would tend to be balanced not only by the reduction in defective parts but through the assurance of continued sales. The determination of clearly defined, reasonable, and measurable quality standards by the department would minimize the possibility of disputes between operator and inspector. Final inspection, or a limited amount of over-inspection, would tend to prevent collusion between employees.

May, 1928

E. H. S.

BUCKNALL COMPANY¹

MANUFACTURER

QUALITY CONTROL—*Inspection of Materials.* A manufacturing company, which used materials with a wide range in grades and which owned an extensively equipped laboratory for testing the quality and properties of the materials, followed a varying policy in regard to the testing of its four most important materials. On large steel shaft stock the company accepted the manufacturers' certificates of tests; compound materials were sampled by the company's testers upon arrival of shipments; samples of wire were sent to the company and tested before shipment was permitted; and a special grade of paper used was tested by the men who handled it continually in the shops.

The wide range in grades of materials used by the Bucknall Company in its products, and the necessity, in many cases, of knowing the constitution and properties of the materials, required decisions not only on the type of tests to be applied but also on the extent to which they should be made currently. The most important materials were large steel shaft stock, a special grade of paper, wire, and material for compounds.

The company owned an extensively equipped testing laboratory and employed a highly trained staff of engineers to control the tests required by the technical nature of its products. In view of the large volume of manufacture, the work of the testing staff was limited to essential tests and investigations. It was uneconomical to go into too fine detail, or to fail to perform tests as early as possible in the manufacturing cycle. The sooner a test was made after materials had arrived, the less chance there was for unnecessary transportation and useless work on defective materials. There was, therefore, a question of whether or not the Bucknall Company should accept the tests and inspections of the manufacturers furnishing the materials.

In placing an order for material on the basis of samples submitted, the Bucknall Company, after determining that the firm from which it was buying the material could maintain production

¹ Fictitious name.

within the desired specifications, had the further question of how often tests should be made to check the performance. The certificate of the vendor might be accepted for each shipment or portion thereof; or the testing staff might either test every shipment or portion thereof; take periodic samples of shipments, or rely on visual and manual inspection in its receiving department and shops.

Of the four materials cited, steel shaft stock required the highest degree of technical knowledge to produce and test. Because of their advances in metallurgy during recent years, the makers were able to make the required tests. In some cases, it was desirable to know not only the chemistry of the steel but also the structural or mechanical variations. These factors were dependent upon the original "melt" and upon subsequent "heat charges." A shipment of stock to the Bucknall Company might contain steel of several different melts and heat charges.

The specifications for compound material allowed reasonable limits in composition. In each shipment, which was uniform throughout, it was necessary not only to know that the material was within the limits but also to know its exact specifications within these limits, so that the quantity of other materials to be mixed with it could be proportioned correctly.

For one type of wire purchased by the Bucknall Company the specifications required an exceptionally high elastic limit. The manufacturer shipped the wire in coils, and had insufficient means for testing it properly for elasticity. Furthermore, the testers of the Bucknall Company had no assurance that all the wire in a shipment had been drawn in the same lot, or that it was uniform throughout.

The special grade of paper used by the Bucknall Company required a specified degree of toughness. Anyone handling the paper continually could easily determine whether it had the required degree of toughness by bending and tearing it. A more scientific method was to place samples in a machine and determine the force necessary to tear or cut them. The paper had been bought for years from an old, established manufacturer with whom orders had been placed less by exact specification than in the spirit of "another shipment like the last one." As long as the manufacturer maintained the grade of the paper the officials of the Bucknall Company were satisfied.

The Bucknall Company accepted the manufacturers' certificates of tests on large shaft stock. A certificate was required for steel from each "melt" and "heat charge" in a shipment. Thus, if a shipment was composed of three lots of steel or "melts," there would be three certificates to cover them. Similarly, if each melt had been split into different "heat charges," a certificate of tests on each of the latter was required.

Compound materials were sampled by the testers of the Bucknall Company upon arrival of shipments. The wire was tested by having two samples per roll sent to the Bucknall Company and approved before shipment was permitted. Testing of the paper was left to the men handling it continually in the shops.

COMMENTARY: The case serves to indicate that proper procedures for the inspection of incoming materials are not subject to arbitrary determination. The decision of the company, despite the presence of an extensively equipped testing laboratory, to apply varying emphases upon the examination of raw materials, is evidence of a discerning management.

The requirement that certificates of test should accompany steel shipments assured the company that the quality of material would be evaluated by the vendor, while the relatively large part which transportation costs play in losses resulting from returned goods would tend to accentuate the vendor's interest in the maintenance of quality standards.

Tests of incoming compounds were made to determine quality for proportioning purposes, and therefore assumed an unusual importance. Inasmuch as the vendor was not being held by the trade to precise quality limits, it is possible that he would not be equipped to undertake such measurements as were required.

Tests necessary to determine limit of elasticity involve the destruction of the material, requiring the use of the sampling method. Inspection by the purchaser was desirable, inasmuch as the product had unusual quality requirements placing it outside the class of products which satisfy common trade standards and whose production within the necessary limits is a matter of routine operation.

The relative unimportance of slight changes in quality in paper, together with the high degree of sensitiveness developed by employees accustomed to the evaluation of this product by handling, made dependence upon their scrutiny justifiable.

May, 1928

E. H. S.

ADDINGTON COMPANY¹

MANUFACTURER—ELECTRICAL APPARATUS

PLANT EQUIPMENT—*Standardization of Machines and Machine Tools Subject to Constant Improvement.* In filling special orders, which, with development work, constituted a large percentage of the production at its main plant, a manufacturer of electrical apparatus had been accustomed to buy, from time to time, the best machine available for performing the necessary operations. The large diversity of machines thus accumulated resulted in inconvenience because the small tools were non-transferable. The question arose whether it would be advisable to standardize the equipment of the plant, in spite of the fact that constant improvements were being made in the machines and machine tools on the market.

(1923)

Many of the machine shops at the main plant of the Addington Company, a manufacturer of electric motors and other types of electrical apparatus, were equipped with two or more models of each type of machine tool. These included such machines as lathes, planers, and milling machines. There was also a large assortment of small tools which were not interchangeable, because those for one make of machine often would not fit another model and the use of adapters had been found to be mechanically undesirable. The resulting heavy investment in equipment led the company in 1923 to consider standardizing its machine tools and small tools.

The situation was the outcome of buying from time to time the best machine on the market for performing the necessary operations as rapidly as possible and at a reasonably low cost of operation. The primary reason for such diversity of buying was the high percentage of special orders filled and the large amount of development work done at the main plant. Among the secondary reasons was the fact that by purchasing from several manufacturers, rather than from a single manufacturer, the company received the benefit of the lower prices resulting from competition among the various makers of machine tools and small tools. Another reason was the possibility of receiving reciprocal orders

¹ Fictitious name.

from machine manufacturers who, if the Addington Company purchased machines from them, would be likely to use Addington Company motors in equipping the machines they sold to other firms.

Although each make of machine at the company's main plant had special characteristics in which it was superior to the rest, inconvenience resulted because the tools were nontransferable. The investment in milling machine tools was particularly heavy because of their relatively high cost.

In general, final scheduling to individual machines in the company's plants was not centralized at one point, but was done in the shops.

The question of standardization brought up the possibility of the company's securing better maintenance and overhauling agreements with manufacturers if the machines were purchased in large quantities. The company could obtain a larger allowance value on the old machines if it adopted a policy of standardization than if it continued its present buying practice, since the manufacturers would wish to place as many new models as possible in active operation by the Addington Company at once. There would be a reduction in the assortment of spare parts as well as in the stock of tools. Any instructions on operation of the machines would be simplified through being applicable to all. Moreover, a good base would be secured for time studies.

There was, however, a steady improvement in the machine tools and small tools on the market. In addition, constant advancement was being made in the various lines of electrical apparatus which the Addington Company manufactured. A large part of the development work in any line was done at the main plant; when standardization of the line was approached, it would often be transferred to a subordinate plant. In some lines, such as induction motors, which were considered as approaching standardization, the proportion of special orders was as high as 47%. Such a percentage of special work required a large force of designing engineers working in keen competition with other electrical companies. Orders were often secured mainly on the basis of superior design, workmanship, and the company's reputation for standing back of its products. The shops were therefore to a large degree in a position of meeting the desires of others rather than their own.

COMMENTARY: Standardization of machine tools for building electrical machinery is a matter of degree, and a matter of the date of the problem. Even a stabilized product of such type of manufacture cannot be made advantageously except by use of a diversity of machine tools, and this diversity is a function of the rate of progress in design of product and of tools, which is different at different times.

This basic situation uncomplicated by other factors develops the familiar fact that considerations of operating and set-up time and cost tend toward excessive diversity and over-equipment, while the investment-cost group of factors, personnel requirements, such as interchange of operators and group operation, and considerations of central scheduling by production men only mildly technical, all establish the opposite tendency. Three added factors increasing the tendency to diversity enter this case. In the first place, both the art of building electrical machinery and the machine-tool art are improving; consequently, with lapse of time there is a real change in manufacturing requirements, and a real opportunity to get tools more exactly adapted to these changed requirements and also better in general respects, that is, capable of faster work, closer work, or better ratio of working to set-up time on changing work, as may be needed. Secondly, electrical equipment includes a wide range of kinds and sizes, further complicated by frequent special features demanded as a condition of purchase. Finally, machine-tool makers are among the large and desirable customers of motor manufacturers, and since the motors of different makers differ but little, it is to be expected that patronage motives will determine many such motor sales.

As to patronage motives in the buying of producers' goods, it is true here, as always, that the purchase of tools not quite best adapted to their purpose, merely to get exchange sales, commonly costs more than the gain received, because the sources of loss are multiplied by a much larger number of recurrences than are the sources of profit. This question should be decided alone and on a basis of the computed profits and losses.

The decision on the other factors will always be a compromise. Old tools cannot be sold every time better ones are developed, and technical superiority in the new offering is not conclusive proof that it should be purchased, while on the other hand equipment must not be allowed to fall seriously behind new developments.

Where production is scheduled from a central point by men whose training does not lead them to give much weight to exact adaptation of equipment to individual jobs, but rather to be guided by machine burden, idle machine costs, and delayed items, the chance of making good use of small tool differences is lessened. The reverse is true where the final scheduling to individual machines

is done in the shop. In this particular company the latter practice mainly prevailed, so that whatever advantages accrue to diverse equipment were maximized.

From the data submitted, it would seem that in future doubts should be resolved in favor of standardization, and that old nonstandard equipment should be disposed of somewhat faster than would be the case if there were not so much of it. Probably no drastic retroactive reversal of policy would be justified.

July, 1928

J. G. C.

WADSWORTH FURNITURE COMPANY¹

MANUFACTURER—FURNITURE

PLANT EQUIPMENT—*Machine Shop Established for Manufacture of Special Tools and Machines.* A furniture manufacturer, after acquiring the plant of a small firm manufacturing hand-made furniture of high quality, decided to install machinery as far as possible throughout the plant. As the company would continue to manufacture to order furniture of any kind desired, it would be necessary to design and develop special machinery for many operations. Although the cost of having these machines constructed by a machinery manufacturer would be less than the expense of installing a machine shop for this work in the mill, the company decided to establish its own shop for this work. It believed that the higher cost would be offset by the company's ability to have the desired tools and machines when needed, without the inconvenience of the delays incident to their manufacture by an outside shop.

(1914)

In 1914, the Wadsworth Furniture Company acquired the small plant of L. H. Manning & Sons,¹ a firm which had built up a reputation as manufacturers of hand-made furniture of high quality. The new management, although it recognized that the hand-made feature of the furniture constituted an important selling point with a limited class of customers, did not consider that an article of furniture lost any of its quality in being made partly by machinery. Since, moreover, the management was certain that it could widen the market for the furniture by making a high-quality but less expensive product, it decided to install machinery as far as possible throughout the mill. For some of the simpler operations, such as ripping and planing, standard types of machines were made by machinery manufacturers, but for other operations it was necessary to design and develop special machinery. The question was raised, therefore, as to whether it was more satisfactory to have the special machines constructed by a machinery manufacturer or to install for this work a small machine shop in the mill.

¹ Fictitious name.

Under the new management the plant continued to manufacture to order, for individual customers and for a few retailers, furniture of any kind or style desired. Each order, for which specifications and drawings were made up in the drafting department, went through the different manufacturing operations separately. Many orders were for single pieces which never would be duplicated, and they often required the development of special tools or of a new machine to perform some of the operations.

The 95 employees of the company were skilled cabinet makers, each of whom was expert in his own line. About 90% of them had been with the company over five years. The men were unionized and were paid union wages.

In addition to the initial investment which would be required for the machine shop equipment, it was expected that the costs of constructing machines in the proposed shop would be higher than the costs of construction by machine manufacturers. It would be impossible, moreover, for the company to install the complete equipment used in large machine shops; in order to reduce the initial expense and to insure a minimum of idleness, the company could consider only a few machines, as, for example, a lathe, a milling machine, a drill, and a grinder, which were adaptable to several different uses. The frequent changes in setting and the readjustments which would be necessary on these machines to adapt them to several different operations also would tend to increase the costs over those of a shop with full equipment.

There were decided advantages to the company, on the other hand, in running its own machine shop. Special tools could be made or repaired whenever needed. When, moreover, it was found desirable to have a certain operation performed by machine, a suitable machine could be developed at once in the shop. The serious difficulty in having a machine built by an outside concern was that in most cases it was impossible to give specifications as to exactly what was wanted; a machine had to be developed and improved until it finally became able to perform satisfactorily the desired operations.

The management decided to establish the small machine shop which had been proposed. In making this decision, it considered that the initial expenses, the higher costs, and the necessarily limited equipment would be offset by the fact that the company could have the desired tools and machines when they

were wanted, and could avoid the inconvenience of delays incident to their manufacture by an outsider. It was also an important factor in the decision that the development of new machines could be accomplished more easily in the mill's own machine shop and that in some cases, furthermore, where it might prove desirable to patent a new machine, it would be unwise to have the construction done by an outside manufacturer.

The results of establishing the new machine shop were considered to be satisfactory. In 1923, there were in use 20 different types of machines, about one-third of which had been developed or adapted in the machine shop to perform operations previously done by hand. Although the shop had been of great value in this kind of service, it was engaged for the most part in making and repairing special tools. All standard tools and equipment were purchased from and repaired by machine and tool manufacturers. There had been sufficient work of a special nature, however, to keep three mechanics constantly occupied in the machine shop of the mill.

COMMENTARY: The question of contributory enterprises in a manufacturing company is narrowed in this case to that of operating a machine shop, principally for developing and building special machines to parallel a hand-made product and subordinately for keeping this and other equipment in repair. Alternatives would be having a machine manufacturer design and build these special machines and maintain them, or engaging a designer to prepare the designs for the machine manufacturer to build.

The development of special machines is an expensive affair however it is undertaken. If the development were entrusted to a maker of woodworking machinery familiar with the requirements, it might be done for an amount considerably less than the cost by other procedure, if the Wadsworth Furniture Company had no objection to letting the builder offer the new machines to competitors. If the intent were to profit by exclusive right to the machines, ordinarily it would be unwise to have them designed and built by a manufacturer whose business and habit of thought was to sell his designs to all customers. Arrangements could perhaps be made to have the builders' designer take out patents and assign them to the Wadsworth Furniture Company, but a reasonable charge for this expert service might be expected to bring the cost above that of building otherwise, and the temptation to develop a machine of similar effect outside the patent would remain. If the last-named arrangement were made with a

shop accustomed to design and build a variety of special machinery to order and to assign the patents, there would be little danger of stimulating competing development, but the designers employed by such shops, while often versatile and competent, could not be expected to know much about woodworking machinery; development under such conditions has usually been found to include an expensive educational process necessarily paid for by the customer.

If the Wadsworth Furniture Company expected to control the new machines, the really practicable alternatives were to set up its own designing and drafting room and shop, or to have the machines designed by a man permanently or temporarily in its employ, and to have them built by an outside shop not unduly interested in the sale of woodworking machines—or else exceptionally sensitive to unenforceable moral rights.

As to the choice between these two alternatives: If it were possible for the designer to make detailed drawings at once from which the final form could be built, the cost in a good jobbing shop would probably be considerably less than in a small owned shop such as that contemplated. Unfortunately, inventions are not made that way. Commonly the cost of building a new machine centers largely around engineering and experimental changes, so that “90% done is half done” is often a gross understatement. Under such circumstances, the closer in distance and interest is the shop where the construction is done to that where the machine is used, the less will be this major developmental item.

The woodworking shop of the case was relatively small, and the skill of the men was not along the line of machine design; both these facts are arguments against setting up a shop to make machinery. The case is not far from the line. If a good designer and a good man for experimental construction could be obtained, however, the choice between hazards would probably be in favor of the privately owned shop. The secondary function of repair and maintenance of the special and standard machines would be a further advantage.

July, 1928

J. G. C.

INTERNATIONAL BLOWER CORPORATION¹

MANUFACTURER—AIR-CIRCULATING APPARATUS

CURTAILMENT OF WORK FORCE—*Proposed in Tool Maintenance Department in Period of Sales Decline.* A company manufacturing air-circulating apparatus customarily experienced seasonal declines in its sales, during which it curtailed operations by reducing the number of men engaged in production. In 1926, when the forecast of the newly established statistical department indicated the usual seasonal decline in the immediate future, that department recommended that the work force of the machine and tool maintenance department be reduced in the same proportion as the productive departments. The management, however, because it believed there was sufficient work to keep the entire force of the department busy during the slack period, because it would be difficult to train new men later when production increased, and because intermittent employment might result in higher wage rates, decided not to reduce the force of the maintenance department.

(1926)

The International Blower Corporation manufactured air-circulating apparatus for a wide range of applications, such as heating and ventilating, air conditioning, drying, conveying, and vacuum cleaning. It also manufactured electric motors, steam engines, turbines, fuel economizers, and other products, most of which, to a large extent, were used in connection with the air-circulating apparatus. The company operated an extensive plant, employing from 900 to 1,000 men, near Bridgeport, Connecticut, a large iron foundry in an adjacent town, and several branch assembly and sheet metal plants in the United States and Canada.

The company had operated for many years, and was internationally known. It had a capital of \$4,000,000 and a surplus of about \$1,000,000. Sales to a large extent were on a contract basis and in many instances highly competitive, but the company's reputation and engineering skill enabled it to take a leading position in the market with a sales volume of about \$6,000,000 annually and net profits of \$300,000 or more. Contracts for heating and ventilating of buildings constituted the larger part of the

¹ Fictitious name.

company's business; about 40% of such contracts were for industrial buildings and the balance for public and private buildings of various kinds. The remainder of the company's output was for the most part for industrial purposes and was applicable to almost every line of industry.

As to design and engineering control, the situation of this company was unusual. The large blowers and exhausters were often required for use differing somewhat from that previously encountered, and special design was required. Orders in the smaller and more nearly standard lines were usually received at irregular intervals and in irregular numbers, and these frequently involved some departures from previous practice. The company had made efforts to develop lines which could be manufactured on a more regular basis, and was beginning to have some measure of success. At the time considered, however, the difficulties of technical planning, especially for any long period in advance, were much greater than would often be found in a company of substantial size.

Seasonal fluctuations usually occurred for two or three months during the winter of each year, and cyclical variations were found to conform fairly closely with certain well-recognized curves. During slack seasons the company curtailed operations by reducing the number of men engaged in productive labor. Reduction of non-productive labor was more difficult to handle and no satisfactory basis had ever been reached. With the establishment of a statistical department early in 1926, an effort was being made to regulate the labor fluctuations on a fair and consistent basis, both in the interests of efficiency and to prevent dissatisfaction in the shop.

In July, 1926, the forecast of the statistical department for the immediate future indicated the customary seasonal decline with possibly a slight coincidental cyclical decline. The general outlook for business, however, for the six months succeeding the seasonal decline was favorable; there were known orders in prospect in considerable volume awaiting release and authorization to proceed. In working out a reduction schedule for the shop labor, the statistical department raised a question as to whether such reduction should be extended to the machine and tool maintenance department. The statistical department inquired why the personnel of the machine and tool maintenance depart-

ment should not be reduced in the same proportion as the productive departments.

The function of the machine and tool maintenance department was to maintain and repair all machinery and equipment throughout the plant, to make and condition small tools, and to make such jigs, dies, and fixtures as were needed for the work in the shops or were considered advantageous in reducing manufacturing costs. It also built special type machine tools and adapted standard machines to special purposes. The department employed some 35 men, at wages averaging 65 cents per hour, with a monthly pay roll of about \$4,600. These tool makers had been gradually developed from workmen in the company's shops; they received no more pay than good mechanics in other parts of the shops and, in fact, less than skilled workers on piecework. Standard wages for expert tool makers elsewhere in the vicinity were from 85 cents to 90 cents per hour.

To the proposal of the statistical department that a reduction in work force proportional to the reduction in the general shop pay roll be considered in the machine and tool maintenance department, the shop superintendent offered the following objections:

He stated that at no time during the past three years had the department had a sufficiently large force to make up all the new equipment which would pay for itself in the reduction of production costs. Theoretically, the amount of money which could be spent in the department for this purpose was the sum sufficient to make all the tools which would prove a profitable investment, taking into consideration both orders immediately available and anticipated orders which the company was reasonably sure of obtaining. Practically, however, the amount was limited by the capital available. The superintendent recognized that during a dull period the natural tendency was to reduce all expense proportionately; he did not believe, however, that this policy was necessarily good practice in the machine and tool maintenance department, primarily because of the difficulty of recruiting and training an increased force to provide for the busy season. He believed that the department could be efficiently operated with an average force that remained constant in size and that by careful planning sufficient work could be provided to keep the entire force profitably employed during the dull seasons.

The superintendent further pointed out that a condition of depressed business in itself tended to increase the demands on the department; at such times the shop frequently had development orders for which it was essential to make tools in order to build the apparatus. With regard to the general work of repairs and maintenance throughout the plant, it was his opinion that the best time for major repairs was during the dull season, that there usually was sufficient excess equipment in the shops to provide against breakdowns, and that the work of the department was sufficiently flexible to care for busy seasons. Although he realized that full operation of the department during dull periods might tend to increase shop overhead and to create dissatisfaction in other departments, it was his best judgment that the department should be operated on practically a uniform basis.

The statistical department, in making its suggestion as to a reduction, recognized that intermittent employment was both socially and economically undesirable, that it tended to increase labor turnover, and in the long run, to raise the wage rates per hour in a given trade. It appreciated the fact that the men in the machine and tool maintenance department were on the whole the best type of workmen in the shop, and that if not given steady work, they would tend to gravitate to other shops, necessitating their replacement later with new men requiring considerable training or demanding higher wages. It was also aware that conditioning of tools could often be deferred somewhat and that there was a certain amount of flexibility in meeting the requirements for new tools.

As against these favorable considerations, the statistical department contended that there was no accurate way of telling at the time whether a dull or busy period was due to seasonal or cyclical changes, that the factory handled a great variety of work which was shifting constantly in kind and quantity, that it was impossible to tell in advance with any degree of accuracy how much of any kind of work would be called for during the coming season, and that to provide tool equipment for the possible peaks in advance would require a very large investment. Since tools, therefore, must largely be made up close to the time when they were needed, a large force of tool makers was necessary in the busy season. Requirements for many of the dies, jigs, and fixtures made in the department were not known far in advance and,

therefore, these must be built as needed. Furthermore, it seemed unlikely that a sufficient number of known needs could be accumulated in advance to keep busy during the dull season the number of men required to meet the peak demand of the busy season. It was feared that by deliberately postponing work to the dull season the company might lose important advantages in manufacturing, through lack of proper equipment. It was also feared that during busy periods, when breakdowns were most frequent and repair and maintenance requirements at their highest, important work might of necessity be deferred, to the detriment of efficiency and with serious injury to machinery. Lastly, it was felt that any attempt to plan future needs far in advance and to accumulate work for the dull season involved a degree of planning which the company was far from attaining, and that, in view of the large number of products manufactured and of the shifting demand, a large accumulation of tools representing a heavy investment in advance of known requirements might be attended with serious consequences.

The management of the International Blower Corporation decided that the work force of the machine and tool maintenance department should be maintained without reduction. The decision was based chiefly on the difficulty and expense of training new men for times of full production, the desirability of keeping down wages rates, and the practicability of providing useful work throughout the slack seasons.

COMMENTARY: Adjustment of volume of maintenance work and size of maintenance force to fluctuations of manufacturing activity presents a general problem faced by most manufacturers. This particular case shows many typical features and a few unusual ones.

As a general statement, one of the less difficult means of regularizing employment is to defer maintenance during busy periods and catch up during slack ones. The degree to which this practice is possible or financially permissible depends on the type of operation and the other governing circumstances. Such regularization of employment as may be possible by any sound means is an important duty of manufacturers toward industry, affecting total demand, morale and development of workers, and citizenship. All that a particular employer can do is to maximize regularity within sound limits set by his discretion; he is a free agent only within such limits, but the spread between the best that he can do with careful planning and the worst that he may stumble into is a wide one.

Continuing the general statement, a number of factors enter: Some jobs, such as building repairs, can be deferred without much harm accruing; others, such as repairing breaks of equipment, permit of no delay; many others, such as the general conditioning of equipment subject to wear, can wait a short time but not a long one. If the building of special equipment is included, there are some items that are needed at once for particular orders; others represent equipment, differing widely in amount in accordance with conditions, that would pay in an acceptable time for construction at a certain real net cost, varying according to the alternative employment of the tools and labor used in making the equipment, and according to the obsolescence risk determined for each case separately. Recurrent and general items can be foreseen, special responses to orders cannot. Some items are a function of time, others of manufacturing activity. The diversity of the work done by this company, and the difficulty of foreseeing the exact character of orders and preparing for them, give a character to the problems of this company that is met more often in small jobbing shops than in plants of the size of this one.

In this case the superintendent, who had been with the company for a considerable time, recommended keeping a substantially constant machine and tool maintenance force and supported his position with the usual arguments, summarized in the case. He was confident of keeping the whole force busy through such periods of dull business as he anticipated, and said that there had been at all times during the last three years more work of a profitable sort than the crew could do.

The statistician, a new man, favored a reduction proportional to that of the general shop pay roll. He emphasized the difficulty of forecasting real needs in special machinery and equipment, the difficulty of distinguishing cyclic from seasonal fluctuations, and of planning far enough ahead to accumulate genuinely profitable work for dull seasons. He feared obsolescence and poor adaptability of work done far ahead, and delay at future peaks on account of reluctance to build up the maintenance force if it could not later easily be reduced.

It is interesting to note that the superintendent appeared to have more disposition to lean on forecasts than did the statistician—an apparently paradoxical situation arising quite naturally out of their respective main responsibilities.

The most important of the unusual conditions affecting the decision lay in the relation between the character and the wages of the maintenance crew. These men had been picked from the shop and constituted the best group in the working force; nevertheless they received only 65 cents an hour, which was not higher than the pay of good day-work mechanics, and was lower than that of good piece-work

men. Standard wages of expert toolmakers elsewhere in the vicinity ranged from 85 to 90 cents.

Where an employer pays a group materially less than the wages current for similar groups in the same labor area, there is an implied obligation, with a very practical aspect, to make up in regularity or in some other way what is lacking in the pay envelope. In this case the aggregate wage differential was something like 33% of a \$4,600 monthly pay roll if these men really rated as toolmakers. Perhaps they fell short of such rating, but we must assume from the statement in the case that they received substantially less than they could have made elsewhere. Probably they were staying for less partly from habit, partly because they liked the work and the superintendent, and, we may suppose, quite largely because the superintendent had in the past been successful in carrying them over dull periods as he was endeavoring to do now.

In the long run the company would have to give some value in exchange for this money-wage deficiency; there are many instances where a considerable differential has been maintained by a policy—perhaps not announced, but long practiced—of offering unusually regular employment. It may be doubted whether anything except such regularity and a superintendent who the men believe can and will look out for them in this respect, would be able to maintain any wide disparity permanently. Unless there were some such attraction, it would seem that this department would tend to become a training school for millwrights and toolmakers, who would drift elsewhere at peak activity unless money wages were progressively raised to a point nearer market rate. Labor turnover cost in maintenance work is high and hard to determine. Skill must be unusually versatile, and familiarity with local equipment and conditions as well as good sense and initiative are necessary. Faulty or incomplete training will take toll at irregular intervals, directly and indirectly, for a long time after a new man starts work.

The case presents only two alternatives, but the decision would not be limited to these. If in fact the best procedure turned out to be shrinking and swelling the maintenance force in percentage consonance with the "direct labor" pay roll, that outcome would be pure chance—and an unlikely chance. Various alternatives should have been considered, and the policy determined on the merits, based on careful weighing of all the factors involved, with due regard to both immediate and remote consequences; productive activity is only one of these factors. Disregarding for the moment turnover cost, morale, and civic responsibility, there are better reasons and opportunities for keeping a maintenance force than a production force nearly constant. Obviously, some maintenance functions vary directly with shop

load, but on the other hand some vary inversely; the best time to overhaul machines is when they are not needed, and the best time to build special machinery of long-term value is when its construction and testing will not interfere with a busy shop. Whatever may be the best thing to do, it is reasonable to suppose that it will not be to govern maintenance employment by merely following the production pay roll. Even if it be decided to regard only considerations of immediate convenience or need, there will ordinarily be a substantial time lag between shrinking of shop orders and the best time to start reducing the maintenance force, and a rate of fluctuation well below average would be normal. If the long-view considerations are included, something near to a constant force can probably be maintained with advantage unless the depression is severe and long continued.

July, 1928

J. G. C.

ROGER BACON COMPANY¹

MANUFACTURER—COTTON GREY GOODS

LABOR SUPPLY—*Welfare Work by Employer to Improve.* A company operating cotton grey goods mills in Alabama continuously found difficulty in obtaining operatives who would work regularly. Its employees, most of whom were from the families of poor mountain whites, were not thrifty, foresighted, or ambitious, and had a low standard of living. In 1921 the company debated whether to continue its program of welfare work, which had been undertaken to improve the industrial qualities of its employees and to reduce labor turnover, but which up to that time had had little success in achieving that object. Although the company realized that any program of welfare work had possibilities of unforeseen complications in later years, particularly since improved standards of living probably would be accompanied by demands for higher wages and employee unrest of another sort than was then experienced, it decided to continue its welfare work, concentrating chiefly upon educational efforts.

(1921)

The mills of the Roger Bacon Company, located at Allston, Alabama, manufactured sheetings, drills, and flannels, classified as grey goods. The mills, in 1921, employed 400 people. The company continuously found difficulty in obtaining operatives who would work regularly. Its laborers were not thrifty, foresighted, or ambitious. Employees were absent frequently, and the number of resignations was unusually large. The company had done welfare work with questionable success, and in 1921 the owners were debating whether to continue their efforts to improve the industrial qualities of the employees or to adopt a merely passive attitude, seeking laborers whenever necessary in the surrounding hills and countryside, keeping those who wished to stay, and regarding the expenses thus incurred as necessary and normal.

The town of Allston had been founded by the company in 1902. By 1921, approximately one-half of the town buildings had been erected on account of the mills, and the population had grown to 2,500 persons. There were two railroad lines, one a

¹ Fictitious name.

through line. The surrounding country was rough and little developed.

The mill operatives were recruited almost wholly from surrounding hills and farms. These people were descendants of white farmers who had owned no slaves and had not been able to compete with the wealthy, slave-owning planters in growing cotton and corn. The children of poor farmers had had little chance for education. After the Civil War these farmers were in competition with emancipated slaves with low standards of living. During this period following the war, there was a migration of the more energetic and pioneering individuals from the South to Kentucky and the West and into the mountains of Georgia, the Carolinas, and Tennessee. Those who migrated to the hills were shut off from the social and economic developments of the last half of the nineteenth century.

These mountain people formed the labor supply for the Roger Bacon Company. They came from shanties on poor farms and from shacks in the mountains. The circumstances described had thrust them into a state of poverty and ignorance far below their native abilities.

Although they had little ambition, they were not degraded, but independent, proud, and sensitive. The older generation, as a class, was unable to read or write; the younger generation had received some education, a result of the state compulsory education laws.

When men from these mountain families came to the mills for employment, usually all the members of their families above the age of 14 or 16 entered the employment of the mill. Many of the older men were unable to adapt themselves to factory work. They quit mill employment and frequently remained at home, deriving their support from wives and children.

Agricultural life suited many of these people best. Every spring some of them returned to the farms to plant crops. If, at the end of six weeks, their crops appeared to be thriving, they stayed on the farm, but otherwise they returned to the mill. After many years no remedy for this situation had been devised.

There was much shifting of the labor supply between the mills of the Roger Bacon Company and other textile manufacturing companies in scattered towns. Some of the workers drifted about in a casual way. They started without a destination

from one town and settled temporarily when their money was spent.

Some lowland tenant farmers drifted to Allston from points as far as 200 miles away. Among southern mill owners a difference of opinion existed regarding the industrial qualities of the lowland tenant farmers as contrasted with those of the mountaineers. The lowland farmer was alleged by many to be less intelligent, sturdy, and industrious than the mountaineer. Few of the lowland farmers went to the mills, for farming was easier in the lowlands than in the mountains. An unquestioned difference existed between the workers of more recent mill towns, such as Allston, and the employees in older mill towns, such as were found in the Carolinas and Georgia. In some of the older mill centers, three generations of workers had grown up about the mills, and the industrial qualities of the people in them were more satisfactory than the qualities of the laborers whom the Roger Bacon Company employed. In the vicinity of Allston were coal mines in which men could earn from \$4 to \$5 a day, considerably higher rates per day than those paid by the Roger Bacon Company. Although mining was open only to men, it drew some of the heads of families from Allston, and their families accompanied them. Employment in the mines was not steady in normal years, and men who left Allston for the mines frequently returned after their resources gave out during periods of idleness.

The Roger Bacon Company had built 125 houses, which accommodated nearly all its employees. There was also a small hotel used by male employees. The people living in the mill houses numbered 850. All the dwellings had electric lights, but only a portion had modern plumbing. The company's rental of 25 cents per room per week was less than half the average rental charged by owners of private houses in the town. The least satisfactory of the company's houses were far better than the dwellings and huts from which many of the older workers had come.

The Roger Bacon Company treated its laborers considerately, and had done the following welfare work: It had established a nursery for the children of mothers who worked in the mills, and employed a nurse to look after the general health of the workers. It had erected a grammar school, at a cost of \$20,000, in which the teaching and maintenance had been taken over by the county.

Courses in home economics were given to girls. Many of the employees previously had eaten only fried food, the "hog and hominy" diet of the South, and newcomers to Allston often were suffering from malnutrition on arrival. The company had established a playground, and it supported employee baseball teams and a band. It had remodeled a building into a motion picture theater and provided a projector. The employees supervised the operating of the theater. A textile club for boy workers in the mills had been formed and in 1920 a small library was started. At the end of the year, 125 library cards had been issued to mill employees.

In February, 1919, the Roger Bacon Company experienced for the first time a prolonged labor shortage. The company hired a labor agent who went into the surrounding district and sent laborers from farms and mountains to the mills. That spring many employees left, but because of bad weather and a poor crop outlook, they returned several months later. Then there were enough laborers and the agent was dismissed. In the spring of 1921, some workers again left for the farms, but the mill's operations were curtailed for other reasons, and there was no labor shortage.

The company's employees did not work regularly, but took time off for trivial reasons. Often no substitutes could be found, and machinery was therefore idle. Approximately 20% of the employees could have been dismissed had those remaining worked regularly.

These unfavorable features of its labor supply were more than offset, however, by the low wages paid by the Roger Bacon Company as contrasted with those paid by its northern competitors. Twenty-five per cent of the final cost of cotton grey goods was labor cost. In 1921 the average annual wage in Alabama cotton mills was \$568, whereas the average wage in Massachusetts and Rhode Island was \$929. Southern mills lawfully could require a worker to spend longer hours at his machines than could northern mills. The difference was approximately 7 hours a week. Many of the southern mills worked on a 2-shift basis; their machinery was run 110 hours a week.

The owners of the Roger Bacon Company believed that the lower wages paid southern labor were explainable, in part at least, by the newer industrial development of that region. According to

the census of 1919, in Massachusetts and Rhode Island the capital investment in industrial plants was \$372,000 per square mile, and the number of wage earners was 90 per square mile. Comparable figures in the four principal southern textile manufacturing states, among them Alabama, were \$10,000 and 2.4 wage earners. The one region was 35 times more "industrialized" than the other. In the South there were few locations where other great industries were bidding for cotton mill employees. Among those, however, was the Birmingham district in Alabama.

Along with the small industrial demand for southern labor was a condition of plentiful supply. Had this labor been willing and able to move outside the section, the situation would have tended to correct itself. Although the people moved about within the district, they lacked the resources and desire to venture into the North and West. This fact, furthermore, was evidence of a fixed standard of living, which, measured in terms of material goods, was confined to bare necessities. A further fact having its influence upon labor supply was the tendency to large families—six children were said to be the average number per family. The increase of white tenant farmers in Alabama from 1900 to 1920 was from 48,000 to 70,000—a growth explainable almost entirely by native population increase.

The individual wage paid to southern mill workers was not an indication of family welfare, since several members of a family usually worked in the mills. A family consisting of a father, mother, and at least two children of working age could earn \$250 a month. Notwithstanding this possibility, it was not a typical occurrence. The people did not work to create savings but only to satisfy immediate wants and occasionally an extravagance. The typical southern mill operative purchased less clothing than did the northern operative. Frequently, opportunity existed for vegetable growing and animal pasturage in or near mill villages.

Educational efforts were limited to children under 16. In the mill towns parents seemed opposed to the education of their children beyond the grammar grades. They thought it best that children then should go to work in the mills. The mills, however, had begun to restrict their employment of children.

Only a small percentage of the total number of children enrolled in public schools graduated from the high schools. The

reasons assigned were incapacity, lack of ambition, lack of encouragement, and financial necessity—the latter was a rare reason. Probably, also, the teachers in some of the mill towns were poorly paid and not held in esteem.

The owners of the Roger Bacon Company realized that southern mills' welfare work was criticized as paternalistic. Most employees said that they would prefer to receive as wages the money spent on welfare work. Few prized the facilities furnished them under welfare programs. The mill managements, however, conducted this work because they believed it essential to maintain the health and morale of the mill communities. Many of the employees had lived in isolated places; diets and standards of life on isolated farms were extremely unhealthful under the confining conditions of factory work in towns. Laborers drawn by the welfare facilities, however, worked regularly, and were likely to advance in their standards of living.

Many southern mills had more modern machinery and equipment than did northern mills. This was true of the Roger Bacon Company. The new equipment of southern mills, however, entailed heavy charges for interest and depreciation. Idleness of machinery caused by irregular attendance of employees thus was unusually costly.

In some ways the southern cotton mill workers were superior to those in the North. Southern mill workers were English-speaking almost without exception, and hence there were no language or racial barriers between them and their overseers such as existed in some northern textile centers. There was not the group jealousy and solidarity that often occasioned difficulty in northern mills. Moreover, southern workers were not organized in labor unions so generally as were the workers in New England. When at work the southern operative was satisfactory in ability and willingness, but his pace was said to be slower than that of the northern textile worker. To what extent climate was responsible for the slower pace of the southern worker was unsettled, but it was without doubt an active factor.

The company's executives realized that in attempting to improve labor conditions they were dealing with intangible forces, operating over long periods, and that any program adopted had possibilities of unforeseen complications in later years. Improved standards of living probably would be accompanied by demands

for higher wages and perhaps bring about unrest of a sort quite different from that which characterized the population in 1921.

The company decided not to attempt to mold the industrial qualities of the people directly, for it did not wish to assume responsibility for the results. It decided to continue its modest program of welfare work, concentrating chiefly upon educational efforts. The specific fields of endeavor were domestic science, personal hygiene, and character building. The executives expected increasing industrial development in the near-by districts, and believed that such growth would lead to greater wealth, more extensive road-building, better educational facilities, and gradual assumption by the state government of fuller industrial responsibilities. As Allston grew older, an increasing proportion of its residents would be native to the place and probably would have less tendency to migrate elsewhere.

COMMENTARY: The Roger Bacon Company was facing a problem of labor turnover. In general, the causes of turnover may be grouped into two classes: those that relate to conditions within an industry, such as wages, types of tasks, conditions of employment, seasonal fluctuations, etc.; and those that lie outside industry proper, such as marriage of women operatives, natural migratory instincts, sickness, etc.

While tasks, wages, and conditions of work in the Roger Bacon Company might be considered unsatisfactory from the standpoint of northern operatives, yet there is no reason to believe that at that time they were so regarded by the southern workers. The Roger Bacon Company was operating upon the same basis as other southern organizations. The real reason for labor turnover was rather to be found in the type of labor which was employed. This situation, however, did not relieve the company from watching very closely for the inevitable industrialization of its labor force and from being prepared to meet that situation as it developed.

For generations the life of the mountain white has been such as to make it impossible for him to adapt himself readily to continuous routine work. Any given mill environment becomes irksome to him even though he has no special grievance; and if one inquires into the situation further, one sees that the very thing which causes the turnover of labor among the mountain whites—namely, the lack of industrial socialization—is what makes it possible for the southern mills to hire workers at low wages, to work long hours, and to operate night shifts. It is this situation that gives the southern mill its differential over its northern competitors. Nor is that all there is to the situation. The forces which would make an operative a good, steady worker and thus

reduce turnover are the same forces which might easily make him a first-class union man, jealous of his rights and conscious of his group power. The company would have no grounds to expect immediate results in attempting to eliminate migratory instincts. The great majority of experiments that look toward changing the habits, traditions, and ideals of groups have demonstrated that success is realized only over very long periods of patient, intelligent control. A veneer of industrial socialization is as likely to prove a boomerang as it is an instrument of progress.

Consequently, the decision of the management to move slowly was sound. Such a conclusion did not in any way relieve the company from its moral and social responsibility to continue to do what it could for the upbuilding of its laborers as a group. Work along the line of home economics, personal hygiene, and character building was consistent with the principles underlying its major decision.

August, 1928

E. C. R.

UNITED LEATHER WORKERS' INTERNATIONAL UNION, LOCAL
LODGE OR UNION No. 66, *et al. v. HERKERT &
MEISEL TRUNK COMPANY, et al.*¹

LABOR UNION—LEATHER INDUSTRY

MANUFACTURERS—TRUNKS AND LEATHER GOODS

LABOR UNIONS—*Employees' Strike Held not Conspiracy in Restraint of Trade.* A strike against manufacturers by their employees was intended by the strikers to prevent, through illegal picketing and intimidation, continued manufacture of products which, when made, were, to the knowledge of the strikers, to be shipped to fill orders of would-be purchasers in other states. The Supreme Court of the United States held that the strike was not a conspiracy to restrain interstate commerce under the Anti-Trust Act, since the strikers did not interfere or attempt to interfere with the free transport and delivery of the manufactured products from the factories to their destination in other states or with their sale in those states.²

(1924)

Mr. Chief Justice TAFT delivered the opinion of the court.

This suit was begun by a bill in equity filed in the District Court for the Eastern District of Missouri by the Herkert & Meisel Trunk Company and four others, all corporations of Missouri, engaged in making trunks and leather goods in St. Louis, against the United Leather Workers' Union, Local Lodge No. 66, an unincorporated association, its officers and agents, and a number of its members. The bill averred that each of the complainants had built up a valuable business in making, selling, and shipping in interstate commerce trunks and leather goods; that each received large quantities of raw material by interstate commerce, and employed a large number of persons, men and girls; that on February 28, 1920, defendants demanded that their shops be unionized and conducted as closed shops, and announced that if complainants refused they would ruin the interstate commerce business of each of them; that on April 10, 1920, the defendants acting individually and on behalf of the defendant union, in order to destroy the complainants' business and to prevent their employees from continuing in their employment, unless complainants would yield to their demands,

¹ Supreme Court of the United States. Argued April 24 and 25, 1924. Decided June 9, 1924. 44 Sup. Ct. 623.

² Headnote by Graduate School of Business Administration.

began a strike, assaulted and threatened complainants' employees, and intimidated them so as to force them against their wills to quit complainants' employment; and that they thereby prevented complainants from engaging in and carrying on their interstate business and interfered and obstructed them in the manufacture and shipment of the products of their factories sold to be shipped in interstate commerce. The bill charged that defendants were carrying out their illegal conspiracy and purposes by mass picketing and intimidation; that the interference with complainants' interstate commerce was intentional and malicious, and was intended to destroy it; that it was in violation of the Anti-Trust Law (Comp. St. 8820 *et seq.*) and the Clayton Act (38 Stat. 730); and that they had already inflicted, and unless restrained would continue to inflict, irreparable injury upon such business. The bill shows that each complainant's damage threatened exceeded \$3,000. The prayer was for a temporary and then a final injunction to prevent the intimidation, illegal picketing, and other interference with complainants' manufacturing and interstate business and with its employees or would-be employees engaged in carrying it on.

Certain of the defendants answered the bill and denied the picketing, intimidation, and violence and the purpose to interfere with complainants' interstate business as charged, and averred that they and the fellow members of the union had lawfully quit the employment of complainants because they could not agree upon the terms of a new agreement. The District Court upon preliminary hearing granted a temporary injunction and upon final hearing granted a final decree enjoining defendants as prayed. The case was taken on appeal to the Circuit Court of Appeals, where the decree of the District Court was affirmed, one judge dissenting.³ The cause now comes before us on appeal under section 241.

The evidence adduced before the District Court showed that the defendant, the Local Union No. 66 of the United Leather Workers, having declared a strike against the complainants and withdrawn its members from their employ, instituted an illegal picketing campaign of intimidation against their employees who were willing to remain and against others willing to take the places of the striking employees, that the effect of this campaign was to prevent the complainants from continuing to manufacture their goods needed to fill the orders they had received from regular customers and would-be purchasers in other states, that such orders covered 90% of all goods manufactured by complainants, that the character of their business was known to the defendants, and that the illegal strike campaign of defendants thus interfered with and obstructed complainants' interstate commerce business to their great loss. There was no evidence whatever to show that complainants were obstructed by the strike or the strikers in shipping to other states the products they had ready to ship or in their receipt of materials from other states needed to make their goods. While the bill averred that defendants had instituted a boycott against complainants and were

³ 284 Fed. 446.

prosecuting the same by illegal methods, there was no evidence whatever that any attempt was made to boycott the sale of the complainants' products in other states or anywhere, or to interfere with its interstate shipments of goods ready to ship.

The sole question here is whether a strike against manufacturers by their employees, intended by the strikers to prevent, through illegal picketing and intimidation, continued manufacture, and having such effect, was a conspiracy to restrain interstate commerce under the Anti-Trust Act, because such products when made were, to the knowledge of the strikers, to be shipped in interstate commerce to fill orders given and accepted by would-be purchasers in other states, in the absence of evidence that the strikers interfered or attempted to interfere with the free transport and delivery of the products when manufactured from the factories to their destination in other states, or with their sale in those states.

We think that this question has already been answered in the negative by this court. In *United Mine Workers v. Coronado Co.*, 259 U. S. 344, 42 Sup. Ct. 570, 66 L. Ed. 975, 27 A.L.R. 762, a coal-mining company in Arkansas changed its arrangement with its employees from a closed shop to an open shop. The local union resented the change and the avowed purpose of the company to protect nonunion employees by armed guards. Violence, murder, and arson were resorted to by the union. Seventy-five percent of the output of the mine was to be shipped out of the state and a car of coal prepared for interstate shipment was destroyed by the mob of strikers and their sympathizers. It was contended that as the result of the conspiracy was to reduce the interstate shipment of coal from the mines by 5,000 tons or more a week, this conspiracy was directed against interstate commerce, and triple damages for the injury inflicted could be recovered under the federal Anti-Trust Law. But this court held otherwise and reversed a judgment for a large amount on the ground that the evidence did not disclose a conspiracy against interstate commerce, justifying recovery under the law. The language of the court was (page 407 [42 Sup. Ct. 570, 582]):

Coal mining is not interstate commerce, and the power of Congress does not extend to its regulation as such. In *Hammer v. Dagenhart*, 247 U. S. 251, 272, we said: "The making of goods and the mining of coal are not commerce, nor does the fact that these things are to be afterwards shipped or used in interstate commerce, make their production a part thereof. *Delaware, Lackawanna & Western R. R. Co. v. Yurkonis*, 238 U. S. 439." Obstruction to coal mining is not a direct obstruction to interstate commerce in coal, although it, of course, may affect it by reducing the amount of coal to be carried in that commerce.⁴

⁴ The same rule was followed in *Gable v. Tonnegut Machinery Co.* (C.C.A.), 274 Fed. 66, 73, 74.

The Circuit Court of Appeals seems first to have based its conclusion on cases like *Rearick v. Pennsylvania*, 203 U.S. 507, 27 Sup. Ct. 159, 51 L. Ed. 295, *Caldwell v. North Carolina*, 187 U.S. 622, 23 Sup. Ct. 229, 47 L. Ed. 336, *Brennan v. Titusville*, 153 U.S. 289, 14 Sup. Ct. 829, 38 L. Ed. 719, and *Robbins v. Shelby Taxing District*, 120 U.S. 489, 497, 7 Sup. Ct. 592, 30 L. Ed. 694. These dealt directly with the sale of goods in interstate commerce. They were cases of state taxation upon the solicitation and acceptance of orders of goods to be sent from one state to another. The subject matter taxed was contracts of sale proposed or made for deliveries of goods in interstate commerce. It is a far cry from such cases to a strike to induce the employers to make better terms with their employees, when no interference with the transportation or future sale of the goods by the strikers is attempted or shown.

The Circuit Court of Appeals found further justification for its conclusion in cases like *Eureka Pipe Line Co. v. Hallanan*, 257 U.S. 265, 42 Sup. Ct. 101, 66 L. Ed. 227, *United Gas Co. v. Hallanan*, 257 U.S. 277, 42 Sup. Ct. 105, 66 L. Ed. 234, *Dahnke-Walker Milling Co. v. Bondurant*, 257 U.S. 282, 42 Sup. Ct. 106, 66 L. Ed. 239, and *Lemke v. Farmers' Grain Co.*, 258 U.S. 50, 42 Sup. Ct. 244, 66 L. Ed. 458. They present the practical conception of interstate commerce elaborated in *Swift & Co. v. United States*, 196 U.S. 375, 25 Sup. Ct. 276, 49 L. Ed. 518, hereafter to be discussed as a flowing stream created by a course of business to be protected against state invasion, but it must be a real and direct invasion and not something incidental or remote. Thus in the Pipe Line Company and Gas Company Cases, the state of West Virginia sought to tax a stream of oil and gas flowing constantly through the state and out of it. It was held that the mere power of those who directed the stream to divert it from interstate commerce, when as a course of business it was constantly interstate, with only incidental and minor diversions to intrastate commerce, did not expose to the taxing power of the state that part of the flow which crossed state lines. The burden and invasion of interstate commerce was direct. In the Bondurant Case, a Tennessee milling company bought a crop of grain in Kentucky, to be delivered on board the cars in Kentucky for shipment to Tennessee in accord with a course of business between the parties. It was held that an effort by the state of Kentucky to require a license of the Tennessee company before it could buy and ship grain from Kentucky to Tennessee was a burden on, and invasion of, inter-

The same general principles are affirmed in *Heisler v. Thomas Colliery Co.*, 260 U.S. 245, 259, 43 Sup. Ct. 83, 67 L. Ed. 237; *Crescent Oil Co. v. Mississippi*, 257 U.S. 129, 136, 42 Sup. Ct. 42, 66 L. Ed. 166; *Arkadelphia Co. v. St. Louis S. W. Ry. Co.*, 249 U.S. 134, 151, 39 Sup. Ct. 237, 63 L. Ed. 517; *McCluskey, Adm'r. v. Marysville Ry. Co.*, 243 U.S. 36, 38, 37 Sup. Ct. 374, 61 L. Ed. 578; *Diamond Glue Co. v. U. S. Glue Co.*, 187 U.S. 611, 616, 23 Sup. Ct. 206, 47 L. Ed. 328; *Capital City Dairy Co. v. Ohio*, 183 U.S. 238, 245, 22 Sup. Ct. 120, 46 L. Ed. 171; *United States v. E. C. Knight Co.*, 156 U.S. 1, 12, 13, 15 Sup. Ct. 249, 39 L. Ed. 325; *Kidd v. Pearson*, 128 U.S. 1, 20, 21, 9 Sup. Ct. 6, 32 L. Ed. 346; *Coe v. Errol*, 116 U.S. 517, 528, 6 Sup. Ct. 475, 29 L. Ed. 715.

state commerce even though the milling company might have stopped the grain in Kentucky contrary to the usual course.

In *Lemke v. Farmers' Grain Co.*, a state law of North Dakota subjected the purchase price of all grain flowing in a regular course of business from that state to the market in Minneapolis, Minn., to a North Dakota inspector who was required to fix the price and determine thereby the profit the buyer should make after paying the freight to Minneapolis at the market price in that city. This was held to be a direct burden and restraint upon the interstate commerce in the grain from one state to the other. It was a direct limitation on that commerce.

None of these cases, although they all illustrate the practical conception of interstate commerce as a flowing stream from one state to another formed by a regular course of business, can properly be said to support the argument that mere intentional cutting down of manufacture or production is a direct restraint of commerce in the product intended to be shipped when ready, or to be any departure from the general rule last announced in the *Coronado Case* and uniformly applied in all the cases referred to above, which it followed. The effect upon interstate commerce in the four cases just cited, on the other hand, was directly burdensome and restraining.

Then the Circuit Court of Appeals found sustaining precedent in *Swift & Co. v. United States*, 196 U.S. 375, 25 Sup. Ct. 276, 49 L. Ed. 518. In that case the defendants were charged with a conspiracy to monopolize interstate commerce in cattle, step by step from the purchase of them on the western plains, in the transportation of them by the railroads through to the stockyards at Chicago, their sale and distribution there, their slaughter and preparation as meats in the packing houses of that city, and their distribution and sale in the East. This court held that such a conspiracy was a violation of the Federal Anti-Trust Law, because it was an intended obstruction to the flow of interstate commerce which Congress in the Anti-Trust Law intended to keep free and untrammelled. It held that the intent to monopolize and restrain the stream of interstate commerce, and the probability that by such methods and steps as were attempted the purpose of the conspiracy could be effected, brought the whole machinery of the conspiracy within the Federal jurisdiction. The case rested wholly on the probably effective intent of the conspirators directed against interstate commerce.

The case of *Addyston Pipe Co. v. United States*, 175 U.S. 211, 20 Sup. Ct. 96, 44 L. Ed. 136, was an agreement between those who made and sold iron pipe in different states to fix prices as between themselves and not sell and deliver pipe from their foundries across state lines in competition with each other. Their intent and ability to control prices and prevent the public from having the benefit of competition in interstate trade brought them within the Federal Anti-Trust Act.

So in the case of *Montague & Co. v. Lowry*, 193 U.S. 38, 24 Sup. Ct. 307, 48 L. Ed. 608, manufacturers in eastern states of tiles and

grates agreed with manufacturers and dealers in California not to sell tiles and grates to local dealers who would not agree to keep up prices. The intent to control commerce between the eastern states and local dealers in California and thus to maintain prices was held to constitute a conspiracy in restraint of interstate commerce. On the other hand, *Hopkins v. United States*, 171 U. S. 604, 19 Sup. Ct. 50, 43 L. Ed. 300, and *United States v. E. C. Knight Co.*, 156 U.S. 1, 15 Sup. Ct. 249, 39 L. Ed. 325, were held not to come within the Federal Anti-Trust Law because the facts of those cases were not thought to reveal the probably effective intent directly to compass the restraint on interstate commerce.

The Knight Case has been looked upon by many as qualified by subsequent decisions of this court. The case is to be sustained only by the view that there was no proof of steps to be taken with intent to monopolize or restrain interstate commerce in sugar, but only proof of the acquisition of stock in sugar manufacturing companies to control its making. As intimated in the Swift Case, 196 U.S. 397, 25 Sup. Ct. 276, 49 L. Ed. 518, the Knight Case was very near the line. See also the distinction pointed out by the Circuit Court of Appeals in *Pennsylvania Sugar R. Co. v. American Sugar Refining Company*, 166 Fed. 254, 256, between that case and the Knight Case. The Knight Case emphasizes the difference between manufacture and interstate commerce. But the Knight Case was a far stronger case for Federal jurisdiction under the Anti-Trust Law because of the probable relation between the monopoly of manufacture and sale in interstate commerce, than the case at bar, in which there is present no element of intended and probable monopoly or discrimination in interstate commerce. The same element was lacking in the Coronado Case.

In *Loewe v. Lawlor*, 208 U.S. 274, 28 Sup. Ct. 301, 52 L. Ed. 488, 13 Ann. Cas. 815, and in *Duplex Co. v. Deering*, 254 U.S. 443, 41 Sup. Ct. 172, 65 L. Ed. 349, 16 A.L.R. 196, members of labor unions having a controversy with their employers sought to embarrass the sales by their employers of the product of their manufacture in other states by boycott and otherwise. They were held guilty of a conspiracy against interstate commerce because of their palpable intent to achieve their purpose by direct obstruction of that commerce.

The cases of *Stafford v. Wallace*, 258 U.S. 495, 42 Sup. Ct. 397, 66 L. Ed. 735, 23 A.L.R. 229, and *Chicago Board of Trade v. Olsen*, 262 U.S. 1, 43 Sup. Ct. 470, 67 L. Ed. 839, are also supposed in some way to sustain the view that a strike against the manufacture of commodities intended to be shipped in interstate commerce is a conspiracy against that commerce. What those cases decided was that when Congress found from investigation that more or less constant abusive practices and a course of business, usually only within state police cognizance, threatened to obstruct or unduly to burden the freedom of interstate commerce, it could by law institute supervision of such course of business in order to prevent the abuses having such effect. As said in *Stafford v. Wallace* (page 520 [42 Sup. Ct. 397, 403]):

The reasonable fear by Congress that such acts, usually lawful and affecting only intrastate commerce when considered alone, will probably and more or less constantly be used in conspiracies against interstate commerce or constitute a direct and undue burden on it, expressed in this remedial legislation, serves the same purpose as the intent charged in the Swift indictment to bring acts of a similar character into the current of interstate commerce for Federal restraint.

In *United States v. Pattern*, 226 U.S. 525, 543, 33 Sup. Ct. 141, 57 L. Ed. 333, 44 L.R.A. (N.S.) 325, running a corner in the available supply of a staple commodity, normally the subject of interstate commerce, in order to enhance its price artificially in the whole country, although the corner was carried on only in New York by sale of cotton futures, was held to be a monopoly of interstate commerce in violation of the Federal Anti-Trust Act. It was the intent to monopolize such commerce and its probability of success which sustained the indictment.

In the Coronado Case, *supra* (page 410 [42 Sup. Ct. 570, 583]), this court referred to the Patten Case and the difference between that and the Coronado Case, as follows:

The difference between the Patten Case and that of *Ware & Leland v. Mobile County*, 209 U.S. 405, illustrates a distinction to be drawn in cases which do not involve interstate commerce intrinsically but which may or may not be regarded as affecting interstate commerce so directly as to be within the Federal regulatory power. In the *Ware & Leland* Case, the question was whether a state could tax the business of a broker dealing in contracts for the future delivery of cotton where there was no obligation to ship from one state to another. The tax was sustained and dealing in cotton futures was held not to be interstate commerce, and yet thereafter, such dealings in cotton futures as were alleged in the Patten Case, where they were part of a conspiracy to bring the entire cotton trade within its influence, were held to be in restraint of interstate commerce. And so in the case at bar, coal mining is not interstate commerce, and obstruction of coal mining, though it may prevent coal from going into interstate commerce, is not a restraint of that commerce unless the obstruction to mining is intended to restrain commerce in it or has necessarily such a direct, material, and substantial effect to restrain it that the intent reasonably must be inferred.

This review of the cases makes it clear that the mere reduction in the supply of an article to be shipped in interstate commerce by the illegal or tortious prevention of its manufacture is ordinarily an indirect and remote obstruction to that commerce. It is only when the intent or the necessary effect upon such commerce in the article is to enable those preventing the manufacture to monopolize its supply, control its price, or discriminate as between its would-be purchasers, that the unlawful

interference with its manufacture can be said directly to burden interstate commerce.

The record is entirely without evidence or circumstances to show that the defendants in their conspiracy to deprive the complainants of their workers were thus directing their scheme against interstate commerce. It is true that they were, in this labor controversy, hoping that the loss of business in selling goods would furnish a motive to the complainants to yield to demands in respect to the terms of employment; but they did nothing which in any way directly interfered with the interstate transportation or sales of the complainants' product.

We concur with the dissenting judge in the Circuit Court of Appeals when, in speaking of the conclusion of the majority, he said:

The natural, logical and inevitable result will be that every strike in any industry or even in any single factory will be within the Sherman Act and subject to Federal jurisdiction provided any appreciable amount of its product enters into interstate commerce. (284 Fed. 446, 464.)

We cannot think that Congress intended any such result in the enactment of the Anti-Trust Act or that the decisions of this court warrant such construction.

Decree reversed.

Mr. Justice MCKENNA, Mr. Justice VAN DEVANTER, and Mr. Justice BUTLER dissent.⁵

⁵ For commentary, see page 188.

INDUSTRIAL ASSOCIATION OF SAN FRANCISCO v. UNITED STATES¹
EMPLOYERS' ASSOCIATION—BUILDING TRADES

LABOR UNIONS—*Employers' Agreements Affecting Chiefly Intrastate Commerce Held Not Illegal.* To advance the open shop plan, employers' associations in building trades combined with dealers in building materials, contractors, and others in an agreement by which builders and contractors were prohibited from purchasing certain essentials of the trade except upon the presentation of "permits." These permits were withheld from persons not in sympathy with the "American plan," which was a rejection of the closed shop plan. The materials for which permits were required were chiefly intrastate, but some incidental and indirect interference with the flow of interstate commerce was shown. The Supreme Court of the United States held that this was not a combination in restraint of trade in violation of the Anti-Trust Act of July 2, 1890.²

(1925)

Mr. Justice SUTHERLAND delivered the opinion of the Court.

This is a suit by the United States against a number of voluntary associations, corporations, and individuals, charging them with engaging, and threatening to continue to engage, in a conspiracy to restrain trade and commerce in building materials among the several states, in violation of the Anti-Trust Act of July 2, 1890 (26 Stat. 209, c. 647; Comp. St. § 8820 *et seq.*). The bill prays for an injunction restraining the further execution of the alleged conspiracy, for a dissolution of certain of the associations as illegal, and for other relief. After a hearing, the Federal District Court declined to dissolve any of the appellants or interfere with their general activities, but entered a decree enjoining them specifically from (a) requiring any permit for the purchase, sale, or use of building materials or supplies produced without the state of California and coming into that state in interstate or foreign commerce; (b) making, as a condition for the issuance of any permit for the purchase, sale, or use of building materials or supplies, any regulations that will interfere with the free movement of building materials, plumbers' or other supplies produced without the state; (c) attempting to prevent or discourage any person without the state from shipping building materials, or other supplies to any person within the state; or (d) aiding, abetting, or assisting, directly or indirectly, individually or col-

¹ Supreme Court of the United States. Argued March 10, 1925. Decided April 13, 1925. 45 Sup. Ct. 403.

² Headnote by Graduate School of Business Administration

lectively, others to do any of the foregoing matters or things.³ A reversal of this decree is sought upon the ground, mainly, that the evidence wholly fails to show any contract, combination, or conspiracy in restraint of interstate or foreign trade or commerce, or a violation in any respect of the provisions of the Anti-Trust Act. Other grounds assigned, in view of the conclusion we have reached, we put aside as unnecessary to be considered.

That there was a combination and concerted action among the appellants, is not disputed. The various agreements, courses of conduct and acts relied upon to establish the case for the government arose out of a long continued controversy or, more accurately, a series of controversies between employers engaged in the construction of buildings in San Francisco, upon the one side, and the building trade unions of San Francisco, of which there were some 50 in number with a combined membership of about 99% of all the workmen engaged in the building industries of that city, upon the other side.

Prior to February 1, 1921, the unions had adopted and enforced, and were then enforcing, many restrictions bearing upon the employment of their members, which the employers, and a large body of other citizens, considered to be unreasonable, uneconomic, and injurious to the building industries, resulting, it was asserted, in decreased production, increased cost, and generally retarded progress. Among the restrictions complained of, were rules limiting the number of apprentices, limiting the amount of work, limiting or forbidding the use of labor-saving devices, and interfering with the legitimate authority of the employer. The plumbers' union, for example, enforced the following, among others: No union plumber, whatever the emergency, was permitted to work on non-union material or to work overtime on Saturday without permission of the union; detailed reports were required, showing the number of fixtures set each day, and men who exceeded the standard fixed by the union were disciplined; the time which any employer was permitted to stay on a job was limited to two hours a day; as many men as the union saw fit could be ordered on a job, regardless of the wishes of the employer. Among the restrictions imposed by the painters' union were these: Wide brushes with long handles for roof painting were prohibited, and it was required that all such work should be done with a small brush; certain labor-saving devices were prohibited; and union painters declined to paint non-union lumber.

The unions rigidly enforced the "closed shop"—that is, they denied the right of the employer to employ any workman, however well qualified, who was not a member of a San Francisco union; and this applied to a member of a labor union in another locality, who, moreover, practically was precluded from joining a San Francisco union by reason of the cost and onerous conditions imposed. They were confederated under the name of the Building Trades Council, by means of which their combined power was exerted in support of the demands and policies of each, until they had acquired a virtual monopoly of all kinds

³ 293 Fed. 925.

of building trade labor in San Francisco, and no building work of any consequence could be done in that city except in subordination to these demands and policies.

Early in 1921, serious differences having arisen between the unions and the employers in respect of wages, hours, and working conditions, an agreement for arbitration was made and a board of arbitrators selected. The board, after a hearing, made a tentative award reducing the scale of wages for the ensuing six months. Challenging the authority of the board to reduce wages, the unions refused to be bound by the award and repudiated and abandoned the arbitration. Strikes ensued, efforts to bring the strikers back to work failed, and building operations in San Francisco practically came to a standstill. Thereupon, in an endeavor to find a solution of the difficulty, mass meetings were held by representative citizens in large numbers and from all walks of life. At these meetings it was resolved that the work of building must go forward, and that, if San Francisco mechanics refused to work, others must be employed from the outside. Funds were raised and placed in the hands of a committee of the San Francisco Chamber of Commerce, and under its direction workmen were brought in from the outside with promises of employment at the wages fixed by the arbitrators. Subsequently the Industrial Association of San Francisco was organized to take the place of the committee and carry on its work. The strikers, however, returned to work, and for a time no objection was made to the employment of non-union workmen. But later demands were made by certain of the unions for the discharge of all non-union workmen and the restoration of the "closed shop." These demands were disregarded, and there was another strike. A boycott was instituted, and acts of violence against persons and property committed. In the meantime, one of the appellants, the Builders' Exchange of San Francisco, with a membership of more than 1,000 building contractors and dealers in building materials, in cooperation with the Industrial Association and other appellants, devised and put into effect what is called the "American plan."

The basic requirement of the plan was that there should be no discrimination for or against an employee on account of his affiliation or nonaffiliation with a labor union, except that at least one nonunion man in each craft should be employed on each particular job as an evidence, it is suggested, of good faith. In effect, the "American plan" and the "open shop" policy are the same.

The principal means adopted to enforce the plan was the "permit system," the object of which was to limit sales of certain specified kinds of materials to builders who supported the plan. To render this restriction effective, the person concerned was required to obtain a permit from the Builders' Exchange, specifying the kinds and quantities of materials to be furnished and the particular job on which they were to be used. The materials specified were cement, lime, plaster, ready-mixed mortar, brick, terra cotta and clay products, sand, rock, and gravel. Substantially all of these were California productions and were

deliberately selected for that reason, in order to avoid interference with interstate commerce. The only material exception was plaster, which was brought in from the outside, but consigned to local representatives of the manufacturers or to local dealers in San Francisco, and brought to rest in salesrooms and warehouses, and commingled with other goods and property, before being subjected to the permit rule. A suggestion was made at one time that, if necessary, the rule would be extended to all other materials used in the building trades; but it does not appear that this was done. It is said that lath of various kinds, wallboard, and Keene cement also were put under the rule; but we think the record discloses that, in fact, this was never agreed upon or carried into effect.

There is evidence of efforts to extend the "American plan" to other cities and states. Permits were extensively withheld in respect of buildings where the "American plan" was not adopted or not enforced. Builders and contractors were constantly urged to observe the plan and were warned that failure to do so would result in a denial of future permits. A check was kept upon shops and building jobs by inspectors, and daily reports were made as to whether the plan was being observed. Whenever it appeared in any case that the plan was not being lived up to, a warning letter was sent out. Under appropriate by-laws, members of organizations subscribing to the plan who violated it were fined, and in some instances expelled, and other methods, not necessary to be recited, in part persuasive and in part coercive, were adopted and enforced, in order to secure a thorough-going maintenance of the plan.

With the conflict between the policy of the "closed shop" and that of the "open shop," or with the "American plan," *per se*, we have nothing to do. And since it clearly appears that the object of the plan was one entirely apart from any purpose to affect interstate commerce, the sole inquiry we are called upon to make is whether the means employed to effectuate it constituted a violation of the Anti-Trust Act, and, in the light of the evidence adduced, that inquiry need be pursued little beyond a consideration of the nature of the permit system, what was done under it, and the effect thereof upon interstate commerce.

The bases of the decree, which, in the opinion of the court below, were established, may be briefly and categorically stated as follows:

1. Permits were required for the purchase of building materials and supplies produced in and brought from other states into California.
2. Permits, even if limited to California-produced materials, nevertheless interfered with and prevented the free movement of building materials and supplies from other states into California.
3. Persons in other states were directly prevented or discouraged from shipping building materials and supplies into California.

It will be well, *in limine*, to emphasize certain clearly established general facts, in the light of which these grounds must be considered. Interference with interstate trade was neither desired nor intended. On the contrary, the desire and intention was to avoid any such interference, and, to this end, the selection of materials subject to the permit

system was substantially confined to California productions. The thing aimed at and sought to be attained was not restraint of the interstate sale or shipment of commodities, but was a purely local matter, namely, regulation of building operations within a limited local area, so as to prevent their domination by the labor unions. Interstate commerce—indeed, commerce of any description—was not the object of attack, “for the sake of which the several specific acts and courses of conduct were done and adopted.”⁴ The facts and circumstances which led to and accompanied the creation of the combination and the concert of action complained of, which we have briefly set forth, apart from other and more direct evidence, are “ample to supply a full local motive for the conspiracy.”⁵

But it is not enough that the object of a combination or conspiracy be outside the purview of the act, if the means adopted to effectuate it directly and unduly obstruct the free flow of interstate commerce. The statute is not aimed alone at combinations and conspiracies which contemplate a restraint of interstate commerce, but includes those which directly and unduly cause such restraint in fact.⁶

It remains to apply these principles, in the light of the facts, to the several grounds above stated, upon which the decree rests.

First. That permits were required for the purchase of materials produced in and brought from other states. To the extent that this may imply that permits were required in respect of building materials or supplies produced outside the state of California and shipped into the state, it is not sustained by the evidence. The record contains two letters signed by the president of the Builders' Exchange to the effect, in one, that there “are added,” and, in the other of later date, that “it is now necessary to add, to the permit system,” other materials than those in the enumerated list, and the person addressed in the second is asked to govern himself accordingly. But the positive, uncontradicted evidence is that, in fact, permits were required for the originally listed materials and for nothing else. While about 28,000 permits in all were issued, there is a significant absence of evidence that any of them so issued related to other than such listed materials. Upon the proof, we reasonably cannot accept the view that these letters are enough to show a departure from the declared and established purpose of the movement on the whole to avoid interference with interstate trade by confining the permit system substantially to California-produced articles.

It is true, however, that plaster, in large measure produced in other states and shipped into California, was on the list; but the evidence is that the permit requirement was confined to such plaster as previously had been brought into the state and commingled with the common

⁴ *Swift & Co. v. United States*, 196 U.S. 375, 397, 25 Sup. Ct. 276, 279 (49 L. Ed. 518).

⁵ *United Mine Workers v. Coronado Co.*, 259 U.S. 344, 411, 42 Sup. Ct. 570, 583 (66 L. Ed. 975, 27 A.L.R. 762).

⁶ See *American Column Co. v. United States*, 257 U.S. 377, 400, 42 Sup. Ct. 114, 66 L. Ed. 284, 21 A.L.R. 1093; *Eastern States Lumber Ass'n v. United States*, 234 U.S. 600, 613, 34 Sup. Ct. 951, 58 L. Ed. 1490, L.R.A. 1915A, 788.

mass of local property, and in respect of which, therefore, the interstate movement and the interstate commercial status had ended. This situation is utterly unlike that presented in the *Swift Case*, *supra*, where, the only interruption of the interstate transit of live stock being that necessary to find a purchaser at the stockyards, and this the usual and constantly recurring course, it was held (pages 398-399 [25 Sup. Ct. 276]) that there was thus constituted "a current of commerce among the states," of which the purchase was but a part and incident. The same is true of *Stafford v. Wallace*, 258 U.S. 495, 516, 42 Sup. Ct. 397, 66 L. Ed. 735, 23 A.L.R. 229, which likewise dealt with the interstate shipment and sale of live stock. The stockyards, to which such live stock was consigned and delivered, are there described, not as a place of rest or final destination but as "a throat through which the current flows," and the sale is only an incident which does not stop the flow but merely changes the private interest in the subject of the current without interfering with its continuity. In *Binderup v. Pathé Exchange*, 263 U.S. 291, 309, 44 Sup. Ct. 96, 68 L. Ed. 308, a commodity produced in one state was consigned to a local agency of the producer in another not as a consummation of the transit, but for delivery to the customer. This court held that the intermediate delivery did not end, and was not intended to end, the movement of the commodity, but merely halted it "as a convenient step in the process of getting it to its final destination."

But here the delivery of the plaster to the local representative or dealer was the closing incident of the interstate movement and ended the authority of the Federal government under the commerce clause of the Constitution. What next was done with it was the result of new and independent arrangements.

In respect of other materials of the character of those on the selected list, brought from other states, it is enough to say that the quantities were not only of little comparative consequence, but it is not shown that they were subjected to the permit rule.

Second. That the permit requirement for California-produced materials interfered with the free movement of materials and supplies from other states. No doubt there was such an interference, but the extent of it, being neither shown nor perhaps capable of being shown, is a matter of surmise. It was, however, an interference not within the design of the appellants, but purely incidental to the accomplishment of a different purpose. The court below laid especial stress upon the point that plumbers' supplies, which for the most part were manufactured outside the state, though not included under the permit system, were prevented from entering the state by the process of refusing a permit to purchase other materials which were under the system, to any one who employed a plumber who was not observing the "American plan." This is to say, in effect, that the building contractor, being unable to purchase the permit materials, and consequently unable to go on with the job, would have no need for plumbing supplies, with the result that the trade in them, to that extent, would be diminished. But this

ignores the all-important fact that there was no interference with the freedom of the outside manufacturer to sell and ship or of the local contractor to buy. The process went no further than to take away the latter's opportunity to use, and, therefore, his incentive to purchase. The effect upon, and interference with, interstate trade, if any, were clearly incidental, indirect and remote—precisely such an interference as this court dealt with in *United Mine Workers v. Coronado Co.*, *supra*, and *United Leather Workers v. Herkert*, 265 U.S. 457, 44 Sup. Ct. 623, 68 L. Ed. 1104, 33 A.L.R. 566.

In the Coronado Case there was an attempt on the part of the owners of a coal mine to operate it upon the "open shop" basis. The officers and members of a local miners' union thereupon engaged in a strike, which was carried on with circumstances of violence resulting in the destruction of property and the injury and death of persons. A conspiracy and an intent to obstruct mining operations were established, and it was proved that the effect thereof was to prevent a part of the product of the mine from going into interstate commerce. It was held that this would not constitute a conspiracy to restrain such commerce, in the absence of proof of an intention to restrain it or proof of such a direct and substantial effect upon it, that such intention reasonably must be inferred. It was pointed out that there was nothing in the circumstances or declarations of the parties to indicate that the strikers had in mind any interference with interstate commerce or competition, when they engaged in the attempt to break up the plan to operate the mines with nonunion labor, and, conceding that the natural result would be to keep the preponderating part of the output of the mine from being shipped out of the state, the effect on interstate commerce was not of such substance that a purpose to restrain interstate commerce might be inferred.

In the United Leather Workers Case there was a strike, accompanied by illegal picketing and intimidation of workers, to prevent, and which had the effect of preventing, the continued manufacture of goods by a trunk company. It was held that this was not a conspiracy to restrain interstate commerce within the Anti-Trust Act, even though the goods, to the knowledge of the strikers, were to be shipped in interstate commerce to fill orders already received and accepted from the company's customers in other states, since there was no actual or attempted interference with their transportation to, or their sale in, such states. There is in this case a complete review of the prior decisions on the subject, upon which the court concludes (page 471 [44 Sup. Ct. 627]):

This review of the cases makes it clear that the mere reduction in the supply of an article to be shipped in interstate commerce, by the illegal or tortious prevention of its manufacture, is ordinarily an indirect and remote obstruction to that commerce. It is only when the intent or necessary effect upon such commerce in the article is to enable those preventing the manufacture to monopolize the supply, control its price or discriminate as between its

would-be purchasers, that the unlawful interference with its manufacture can be said directly to burden interstate commerce.

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 We concur with the dissenting judge in the Circuit Court of Appeals when, in speaking of the conclusion of the majority, he said: "The natural, logical and inevitable result will be that every strike in any industry or even in any single factory will be within the Sherman Act and subject to Federal jurisdiction provided any appreciable amount of its product enters into interstate commerce."

In its essential features, the present case is controlled by this reasoning. If an executed agreement to strike, with the object and effect of closing down a mine or a factory, by preventing the employment of necessary workmen, the indirect result of which is that the sale and shipment of goods and products in interstate commerce is prevented or diminished, is not an unlawful restraint of such commerce, it cannot consistently be held otherwise in respect of an agreement and combination of employers or others to frustrate a strike and defeat the strikers by keeping essential domestic building materials out of their hands and the hands of their sympathizers, because the means employed, whether lawful or unlawful, produce a like indirect result. The alleged conspiracy and the acts here complained of, spent their intended and direct force upon a local situation—for building is as essentially local as mining, manufacturing, or growing crops—and if, by a resulting diminution of the commercial demand, interstate trade was curtailed either generally or in specific instances, that was a fortuitous consequence so remote and indirect as plainly to cause it to fall outside the reach of the Sherman Act (Comp. St. § 8820 *et seq.*).

The government relies with much confidence upon *Loewe v. Lawlor*, 208 U.S. 274, 28 Sup. Ct. 301, 52 L. Ed. 488, 13 Ann. Cas. 815, and *Duplex Co. v. Deering*, 254 U.S. 443, 41 Sup. Ct. 172, 65 L. Ed. 349, 16 A.L.R. 196; but the facts there and the facts here were entirely different. Both cases, like the Coronado and the United Leather Workers cases and the present case, arose out of labor disputes; but in the former cases, unlike the latter ones, the object of the labor organizations was sought to be attained by a country-wide boycott of the employer's goods for the direct purpose of preventing their sale and transportation in interstate commerce in order to force a compliance with their demands. The four cases and the one here, considered together, clearly illustrate the vital difference, under the Sherman Act, between a direct, substantial, and intentional interference with interstate commerce and an interference which is incidental, indirect, remote, and outside the purposes of those causing it.

Third. That persons in other states were directly prevented or discouraged from shipping into California. In respect of the alleged instances of direct interference with interstate sales and shipments, the evidence is sharply conflicting, with the preponderance in most cases,

we think, on the side of appellants. In many of them the interferences had no connection with the "American plan," or the system and efforts employed to effectuate it, but were in furtherance of independent trade policies or other isolated and disconnected purposes. One such case was that of the Golden Gate Building Material Company, consisting of five plastering contractors, where the basis of the refusal to accept orders for supplies was a protest by certain dealers that the company was buying for individual use and not for resale, and had been formed merely to obtain dealers' prices. A class of interferences strongly pressed in argument was that in respect of plumbing supplies, practically all of which were manufactured outside the state of California. Lists of plumbing contractors who were not observing the "American plan" were sent to the plumbing supply houses, and some of them refused to sell materials to such contractors. That there was, at least, a sympathetic connection between this action and the "American plan," may be assumed, although plumbing supplies were not within the scope of the permit list. However this may be, and whatever may have been the original situation, the practice was abandoned long before the present suit was instituted, and nothing appears by way of threat or otherwise to indicate the probability of its ever being resumed. Under these circumstances, there is no basis for present relief by injunction.⁷

By the foregoing process of elimination, the interferences which may have been unlawful are reduced to some three or four sporadic and doubtful instances, during a period of nearly two years. And when we consider that the aggregate value of the materials involved in these few and widely separated instances, was, at the utmost, a few thousand dollars, compared with an estimated expenditure of \$1,000,000,000 in the construction of buildings in San Francisco during the same time, their weight, as evidence to establish a conspiracy to restrain interstate commerce or to establish such restraint in fact, becomes so insignificant as to call for the application of the maxim, "*De minimis non curat lex.*" To extend a statute intended to reach and suppress real interferences with the free flow of commerce among the states to a situation so equivocal and so lacking in substance would be to cast doubt upon the serious purpose with which it was framed.

The decree of the court below must be reversed, and the cause remanded, with instructions to dismiss the bill.

Decree reversed.

⁷ *United States v. U. S. Steel Corp.*, 251 U.S. 417, 444, 445, 40 Sup. Ct. 293, 64 L. Ed. 343, 8 A.L.R. 1121.

UNITED LEATHER WORKERS' INTERNATIONAL UNION, LOCAL
LODGE OR UNION NO. 66, *et al.* v. HERKERT & MEISEL
TRUNK COMPANY, *et al.*⁸

INDUSTRIAL ASSOCIATION OF SAN FRANCISCO v. UNITED STATES⁹

COMMENTARY: The legal point in both of these cases is practically the same, namely, that an "incidental, indirect, remote" interference with interstate commerce does not bring a case pertaining primarily to an intrastate business within the purview of federal antitrust legislation, even though it happens to cause an actual diminution in the flow of a commodity out of the state, as in the first case, or into the state, as in the second. Nor does it make any difference that in the first case the combination complained of was one of employees and, in the second, one of employers engaged primarily in a labor controversy.

It is noteworthy that in order to reach the conclusion that the interference in each of these cases was so slight and incidental as to come within the maxim "*De minimis non curat lex*," it was necessary to make a careful analysis of the business facts involved. The lower court in each of the cases assumed that it was sufficient ground for jurisdiction that there was an interference with interstate commerce and that it was not for the court to make any distinction on the basis of the size of the interference or of the question whether it was deliberate or only incidental. By repudiating this point of view, the Supreme Court has established an interpretation of the anti-trust laws similar to the rule of reason in connection with restraint of trade. Perhaps it is even of greater significance than was that rule of reason, because of its application to a wider range of business activities. It may mean, for example, that the Federal government has relaxed its hold on local unions, local trade associations, and even local combinations, and left them to be controlled by state laws regardless of the minor checks on the flow of goods in interstate commerce resulting incidentally—though perhaps rather directly—from their activities.

April, 1927

N. I.

⁸ See page 171.

⁹ See page 179.

CORDOVA ASSOCIATION¹

TRADE ASSOCIATION—SHOES

TRADE ASSOCIATIONS—*Opposition to Legislation Affecting Shoe Industry.* In 1924 an association of shoe manufacturers learned that a bill authorizing the establishment of a shoe factory in a Federal penitentiary for the manufacture of shoes to be sold to the Army, Navy, and other government departments had been passed by Congress. Another bill to provide the necessary funds for the project had been reported by the House Appropriations Committee and was before the Senate committee. The association decided to combine with other shoe manufacturers' associations and with shoe labor unions to obtain a hearing before the Senate committee, in an attempt to render the legislation ineffective by preventing the passage of the appropriations bill.

(1924)

The Cordova Association, with headquarters located in the eastern part of the United States, had a membership of over 300 shoe manufacturers. The association was an important force in the shoe industry of the United States. Its aims were to further the interests of its members and of the shoe industry in general. Since all statistics given out by the secretary were figures compiled by the government, there was no possibility of violating the requirements of the Federal Trade Commission in regard to the collection and use of statistics for price fixing or for the curtailment of production. The main activities of the association were connected with legislation, transportation, foreign trade, publicity, and industrial education. No uniform cost accounting plan or system of arbitration had been adopted. The membership included manufacturers of all types of shoes, from workmen's low-grade boots to women's novelty footwear.

In 1924 a bill which authorized the establishment of a shoe factory in a Federal penitentiary for the manufacture of shoes to be sold to the Army, Navy, Indian, and other government departments was passed by Congress and signed by the President. No hearings on the bill at which the industry was represented had been held. Another bill to provide the necessary funds for

¹ Fictitious name.

the project had been reported by the House Appropriations Committee and was before the Senate committee when the Cordova Association first realized the significance of such a law. The advisability of attempting to render the legislation ineffective by preventing the appropriation necessary to put it into effect was then considered by the association.

Nearly half of those shoe manufacturers in the United States who regularly filled government contracts were members of the association, but they formed not more than 10% of its total enrollment. The government annually contracted for about \$5,000,000 worth of shoes. It was estimated that the labor cost of filling these contracts amounted to \$1,250,000. Conditions in the shoe industry in the first three months of 1924 had been depressed, and the loss of government contracts would cause more workmen to be laid off.

Although the association recognized the right of the government to reduce expenses wherever possible in order to lower taxes, it was not certain that a factory operated by prisoners inexperienced in shoe manufacturing would result in a saving. The shoes required by the government were of a plain type, but a degree of skill was necessary to make them, even with the most modern shoe machinery. During the time in which the prisoners were being taught to operate the machines, the cost of manufacture would be greater than the price at which the government could purchase the shoes. The quality of prison products, moreover, never was so high as that of regular manufacturers.

Although only 10% of the members of the association were involved directly, if they were deprived of their market, they would compete with the remaining members in the manufacture of other types of shoes. The entire industry, therefore, was likely to be disturbed by the proposed legislation. The association, by combining with other shoe manufacturers' associations and with shoe labor unions, could present strong opposition before the senatorial committee on appropriations. Progress in the shoe industry had been hindered in the past by disagreements between manufacturers and labor associations and also between manufacturers located in the East and those in the Middle West. The secretary of the Cordova Association believed that these conflicting interests, by uniting in a common cause, might learn the value of cooperation.

Inasmuch as the law had been passed by Congress and signed by the President, the only permanent remedy was to have the law repealed; a repeal, however, would be both difficult and costly. All that could be done in March, 1924, was to obtain a hearing before the Senate committee and to try to persuade the committee not to appropriate money for the project. The cost of sending a delegation to Washington and of drawing up a brief for the committee was about \$1,000. It would be necessary that important manufacturers who were prominent members of the association be sent to Washington to testify. The success of such action seemed doubtful, in view of the fact that the original bill had become law and that the appropriations bill had been reported favorably by the House Appropriations Committee. Even if the proposed plan were successful, the same problem would arise from year to year with each general appropriations bill. Several years might be required to obtain the repeal of the law. In the meantime, if the association decided to oppose the legislation, the expense of sending delegations to Washington would have to be met each time an appropriations bill was introduced.

The Cordova Association decided to obtain a hearing in cooperation with other shoe manufacturers' associations and with shoe labor unions in an effort to prevent the passage of the appropriations bill.

COMMENTARY: Prison labor is from time to time a cause for lobbying by any trade with which it threatens to compete. There is a general agreement that prisoners should not be kept in idleness, and, of course, it is obvious that the number of trades in which they can be trained or trusted is limited. The general attitude of each trade experimented with is that some other trade should be chosen, and arguments usually are forthcoming as to the degree of skill required in the industry in question, the danger of its disruption by the competition of prison labor, and the like. Furthermore, there are constitutional and other difficulties involved in the attempt to keep out of any state the prison labor products of another. In view of this well-known situation it is manifestly unfair for a legislature to make provision for prison labor in any industry without giving an opportunity for a hearing to that industry.

It is true that in the present case, as in prison labor legislation in general, an attempt was made to keep the products outside the general channels of business. Thus, prison labor is used frequently in

making articles purchased by the state, such as automobile licenses, and the like. In this instance, the shoes spoken of were for the Army, Navy, Indian, and other government departments. Yet the commodity was of exactly the same nature as that which was used in the general channels of business and was to be produced by the government in fairly direct competition with the industry.

The procedure suggested here of calling together the industry and the labor involved therein to lobby against the appropriations bill after the principal bill was passed may seem strange, until we realize that the separation of the appropriations clause from the principal bill was purely a bit of legislative procedure and amounted virtually to a division of the bill into two parts for practical purposes. The merits of the case could be gone into in connection with the second part as well as the first, and though a legislative inconsistency might result from the passage of an act accompanied by the failure to pass a supplementary act necessary to put the first into effect, such inconsistency is by no means unusual in legislative history. A problem would be left for Congress at its next session to determine whether to repeal or modify the principal bill or to revive the bill in effect by further legislation. From a practical point of view, the organization of the lobby while the feeling of resentment in the industry was fresh might be worth while as a basis for further adjustment of the difficulty, even if there was little hope of defeating the appropriations bill of this session.

July, 1927

N. I.

BROOKVILLE ELECTRIC COMPANY¹

PUBLIC UTILITY—ELECTRICITY

PLANT EXPANSION—*Guaranty of Return to Public Utility Ordered by Public Service Commission.* When a company supplying electricity for light and power refused to finance line extensions into a thinly settled rural district, residents of the district petitioned the Public Service Commission. The company submitted plans to the commission under which the company offered to finance the extensions, provided the customers paid a charge sufficient to meet the excess cost of the rural service. The commission, acting on the theory that the company had a duty to the entire territory included in its charter but that residents of isolated portions of the territory should not receive service at less than cost, ordered the company to make three of the four extensions requested, provided the petitioners guaranteed the company an annual return specified by the commission.

PLANT EXPANSION—*Financing by Public Utility.* A company supplying electricity for light and power was requested by residents of a thinly settled rural district to extend its lines into the district. After making a detailed study of probable costs of construction and operation and probable revenue, the company offered to finance part of the construction if the residents would finance the remainder, or to pay the total construction on the investment. The residents refused the company's offers and appealed to the Public Service Commission.

PLANT EXPANSION—*Refused because of Inadequate Revenue to Be Obtained.* An electric light and power company, asked by residents of a thinly settled rural district to make line extensions into the district, refused to do so, because the probable revenue from the territory was inadequate to justify the costs of the extensions and because the residents were unwilling to finance the excess costs of construction or to guarantee a satisfactory annual return to the company.

(1922)

In 1922 a committee representing the residents of a thinly settled rural district requested the Brookville Electric Company to make 4 branch extensions of its lines, totaling 11 miles, and to serve the new territory at the company's established rates. The company agreed to make a careful survey of the situation and to furnish information to the committee as to costs and the

¹ Fictitious name.

terms under which the company would be willing to make the extensions.

The Brookville Electric Company was a small utility organized under the laws of the state of Vermont; it furnished electrical energy for light and power to the towns of Brookville and Hopedale, which were close to the New Hampshire state line. In 1915 the Princeton Power Company,² located in the city of Princeton, New Hampshire, just across the state line from Brookville, had acquired control of the Brookville Electric Company. In 1916, with the approval of the Public Service Commission of Vermont, the Brookville Electric Company had leased all its property, its rights, and its franchise to the Princeton Power Company for 99 years. Under the terms of this lease, the Princeton Power Company received all the revenues and assumed all the expenses connected with the operation of the Brookville Electric Company, and paid 7% per annum on the outstanding capital stock of that company.

The Princeton Power Company operated the Brookville Electric Company essentially as one of the departments of the controlling company. The corporate organization of the Brookville Electric Company continued, however, since the territories which the two companies served were in different states. The Brookville Electric Company was amenable to the Public Service Commission and had the right to issue stocks and bonds. The Princeton Power Company expected its subsidiary to operate as a profitable unit; the controlling company, however, had either to bear any deficit resulting from the operations of the Brookville Electric Company or to pass the increased expense of operations on to the company's customers in the form of increased rates. The gross revenues of the Brookville Electric Company were a matter of record, but the Princeton Power Company kept no separate account of the operating expenses of the subsidiary. The central station of the Princeton Power Company generated the energy distributed through both companies and the same schedule of rates for all classes of service applied in all territories to which either company supplied electricity.

Although Brookville and Princeton were in different states and a small river separated them, for all practical purposes Brookville was a part of Princeton. Hopedale, which adjoined Brook-

² Fictitious name.

ville, was a farming community, but the population in the district nearest Brookville was sufficiently compact to give it an urban character. Beyond lay a farming district sparsely settled and distinctly rural. It was into this territory that the committee of citizens had requested the company to extend its lines.

The total number of the Princeton Power Company's customers of all classes was 4,809, of which 849, or 17.65%, were located in Brookville and Hopedale. Exhibit 1 shows the distribution of the company's customers by types of service and by location in 1921.

EXHIBIT 1

CUSTOMERS OF PRINCETON POWER COMPANY, AS OF DECEMBER 31, 1921, CLASSIFIED BY LOCATION AND BY TYPE OF SERVICE

	Total	Miscellaneous	Brookville	Hopedale	Princeton	Newton	Bartlett	Peacedale	Arlington	Davis
Total.....	4,809	8	691	158	2,404	21	122	535	68	802
Commercial lighting.....	4,345	..	638	149	2,219	9	109	442	57	722
Commercial power.....	393	..	47	7	167	5	9	86	8	64
Municipal street lighting.....	11	..	1	...	1	1	1	1	1	5
Municipal buildings.....	43	..	3	2	15	4	2	6	1	10
Municipal power.....	9	..	2	...	2	2	1	...	1	1
Railways.....	5	5	...	...	...	..	...	...	..	...
Utilities.....	3	3	...	...	...	..	...	...	..	...

EXHIBIT 2

COMPARATIVE STATEMENT OF EARNINGS OF PRINCETON POWER COMPANY, 1920 AND 1921

	1920	1921
Operating Revenue.....	\$863,477.32	\$713,754.14*
Operating Expenses, Including Taxes and Depreciation.....	793,632.21	597,845.09
	\$ 69,845.11	\$115,909.05
Nonoperating Revenue.....	8,925.78	6,981.17
	\$ 78,770.89	\$122,890.22
Deductions:		
Interest—Bonds.....	\$38,300.00	\$39,341.67
Interest—Notes.....	33,421.42	63,950.32
	71,721.42	103,291.99
Income.....	\$ 7,049.47	\$ 19,598.23

* Derived as follows:

Class of Service	Amount	Percentage of Total
Commercial Lighting.....	\$193,732.47	27.0 %
Commercial Power.....	76,393.16	10.7
Municipal Service.....	33,782.96	4.7
Street Railway Power.....	315,347.28	44.2
Electric Light Company Power.....	94,801.93	13.3
Miscellaneous Revenue	696.34	0.1
	\$713,754.14	100.0 %

A comparative statement of operating revenues and expenses of the Princeton Power Company, including data for Brookville and Hopedale, for 1920 and 1921, and the condensed balance sheet of December 31, 1921, are given in Exhibits 2 and 3.

EXHIBIT 3

CONDENSED BALANCE SHEET OF PRINCETON POWER COMPANY, AS OF
DECEMBER 31, 1921

ASSETS		
Property.....	\$2,883,903.94	
Work-in-progress.....	126,353.80	
Liberty Bonds.....	450.00	
Cash.....	11,012.97	
Accounts Receivable.....	138,901.90	
Notes Receivable.....	5,449.42	
Material.....	185,296.77	
Prepaid Accounts.....	30,138.96	
Unadjusted Debits.....	15,038.28	
		\$3,396,546.04
LIABILITIES		
Common Stock.....	\$1,000,000.00	
Preferred Stock.....	500,000.00	
Funded Debt.....	1,016,000.00	
Notes Payable.....	668,000.00	
Accounts Payable.....	50,537.37	
Unpaid Interest.....	90,000.00	
Accrued Accounts—		
Interest.....	67,485.28	
Depreciation.....	25,898.94	
Miscellaneous.....	651.90	
Reserves.....	3,642.96	
Unadjusted Credits.....	1,473.33	
	\$3,423,689.78	
Deficit.....	27,143.74	
		\$3,396,546.04

A comparative statement of the total property account and the annual gross revenue of the Brookville Electric Company for the period from 1917 through 1921, together with the number of kilowatt hours of electricity annually metered to the company, appears in Exhibit 4.

The total gross income from the towns of Brookville and Hopedale was \$25,157.95 in 1921, of which \$19,836.77, or about 80%, was revenue from lighting. This revenue came from 787 consumers, and represented an average revenue from each lighting customer of \$25.21 per year. The revenue per lighting cus-

tomers for all other territory that the Princeton Power Company served was \$48.60. Exhibit 5 presents by classes of service the kilowatt hours which the Brookville Electric Company sold, the revenue, and the average rates per kilowatt hour for 1921.

EXHIBIT 4

TOTAL PROPERTY ACCOUNT AND ANNUAL GROSS REVENUE OF BROOKVILLE ELECTRIC COMPANY, AND NUMBER OF KILOWATT HOURS DELIVERED TO BROOKVILLE FEEDER, 1917 THROUGH 1921

Year	Total Property Account as of December 31	Annual Gross Revenue	Kilowatt Hours Delivered to Brookville Feeder
1917.....	\$31,467.23	\$ 9,605.62	108,980
1918.....	33,304.14	not available	168,629
1919.....	38,518.02	17,426.03	226,380
1920.....	42,797.48	23,191.21	260,210
1921.....	47,960.00	25,157.95	283,910

EXHIBIT 5

KILOWATT HOURS SOLD, REVENUE, AND AVERAGE CHARGE BY CLASSES OF SERVICE, IN BROOKVILLE ELECTRIC COMPANY, 1921

CLASS OF SERVICE	KILOWATT HOURS	REVENUE	AVERAGE RATE PER KILOWATT HOUR	GROSS REVENUE PER CUSTOMER	
				Commercial Lighting	Commercial Power
Commercial lighting:			(cents)		
Flat.....	3,409	\$ 273.65	8.03		
Commercial lighting:					
Meter.....	115,764	19,563.12	16.89		
Commercial power.....	51,697	2,775.32	5.37		
Municipal Service.....	16,046	2,545.86	15.87		
	186,916	\$25,157.95	13.46		
Community:					
Brookville.....	163,160	\$21,607.47	13.24	\$26.75	\$55.14
Hopedale.....	23,756	3,550.48	14.95	18.59	26.28
Total.....	186,916	\$25,157.95			

The Brookville Electric Company's engineers prepared detailed estimates of the cost of constructing the four branch lines which the committee had requested. A summary of these estimates appears in Exhibit 6.

EXHIBIT 6

LENGTH AND ESTIMATED COST OF PROPOSED EXTENSIONS OF
BROOKVILLE ELECTRIC COMPANY'S SERVICE

Section	Length	Estimated Cost
1.....	13,000 feet	\$ 3,684.70
2.....	16,500 "	4,993.33
3.....	8,000 "	2,374.33
4.....	16,500 "	4,908.65
Total.....		\$15,961.01

The committee stated that the company would secure 75 additional customers if it made the proposed extensions. In the portion of the town of Hopedale already served or in which service was available, there were 335 dwellings, stores, and public buildings. Of this number 158, or 47.2%, were purchasing electricity. The company's gross revenue per consumer, in 1921, averaged \$22.47. A survey showed that in the district in which the committee requested extensions there were 106 buildings that might be lighted by electricity, classified as follows:

Permanent Residences.....	94
Summer Residences.....	1
Schools.....	4
Stores.....	2
Post Office, Depot, Freight House, Cider Mill, Church (1 each)...	5
Total.....	106
Vacant Residences.....	4
Isolated Barns.....	2

Since there seemed to be no reason for the company to expect a larger percentage of users or greater annual gross revenue per consumer in the districts seeking service than the company had obtained in the district it was serving, and since the number of potential consumers was not likely to increase, the executives believed that they could not secure more than 50 additional customers in the rural district. In making an estimate of annual gross revenue from the proposed extensions, the engineers used \$25 as an average figure for the annual income per consumer, and thus secured a total of \$1,250 per year. The ratio of investment to gross revenue would be approximately 12.7 to 1 on the proposed extensions. The existing ratio of investment to gross

revenue for the Brookville Electric Company was 3.2 to 1. The same ratio applied to the proposed extensions would warrant a capital investment of not more than \$4,000.

In order to determine whether the Brookville Electric Company could afford to make an investment of nearly \$16,000 with a probable gross annual return of \$1,250, it was necessary to figure the approximate net income of that company as distinguished from the Princeton Power Company. The engineers could determine the cost of supplying service in Brookville and Hopedale upon the basis of the total cost to the Princeton Power Company of furnishing the same class of service in its whole territory. It was obvious that the costs of commercial and residential lighting service bore little relation to the costs of service to consumers of large quantities of power. The rates for lighting service, which were invariably higher than power rates, reflected this situation.

The kilowatt hours billed to users of the various types of service by the Princeton Power Company, and the average rates for each type, in 1921, were as shown in Exhibit 7.

EXHIBIT 7

NUMBER OF CUSTOMERS, KILOWATT HOURS BILLED, AND AVERAGE CHARGE, BY CLASSES OF SERVICE, IN PRINCETON POWER COMPANY, 1921

Class of Service	Number of Customers	Kilowatt Hours Billed	Percentage of Total	Average Rate per Kilowatt Hour (cents)
Commercial lighting.....	4,433	1,450,669	6.96%	13.30
Commercial power.....	401	1,860,249	8.92	4.11
Municipal service.....	62	368,265	1.77	9.20
Street railway power.....	5	11,231,932	53.86	2.80
Electric light company.....	2	5,940,369	28.49	1.60
Total.....	4,903	20,851,484	100.00%	3.42

If the company had only the seven power customers who were taking 82% of its output, a large part of its business organization, consisting of local officers, clerks, meter readers, solicitors, collectors, line men, and storekeepers, would be unnecessary; the cost of serving power consumers alone would be only slightly more than the expense of operating the power house.

In order to obtain the kilowatt hour costs chargeable to the sale of electricity for lighting and for power in small quantities,

including the quantity which municipalities used for light and power, the company assumed that it should assign 80% of the following expenses to this class of service:

Transmission.....	\$ 12,203.28
Distribution.....	28,042.07
Utilization.....	5,125.61
Commercial.....	3,066.68
New Business.....	2,897.84
General.....	37,097.52
Miscellaneous.....	29,668.72

\$118,101.72

80% = \$94,481.38

Application of this expense to the 1,818,934 kilowatt hours sold to commercial light and municipal service customers in 1921, gave an average cost per kilowatt hour of \$0.0519. In making this estimate the company did not include the 1,860,249 kilowatt hours delivered to commercial power customers, since the company considered this class of consumers to belong more properly to the group of users of power in large quantities. In 1921, the average switchboard cost for all energy which the Princeton Power Company developed was \$0.0177 per kilowatt hour. During the same year, the controlling company delivered 283,910 kilowatt hours to the Brookville feeder, although the subsidiary sold only 186,916 kilowatt hours in Brookville and Hopedale; line and transformer losses accounted for the remaining 96,994 kilowatt hours. The average per kilowatt hour production cost of the energy sold in Brookville and Hopedale, therefore, was \$0.0268, and the total cost, based on these estimates, was:

Production.....	\$ 5,009.34 or \$0.0268 per kilowatt hour
Other Costs.....	9,700.94 or 0.0519 " " "
Total.....	\$14,710.28 or \$0.0787 " " "

The property investment of the Brookville Electric Company, as of December 31, 1921, was \$47,960, and the plant and line investment of the Princeton Power Company made for distribution of energy in Brookville and Hopedale was approximately \$32,000; the total investment in the subsidiary company, therefore, was about \$80,000. If the Princeton Power Company determined the share of its investment which was properly chargeable to rates in Brookville and Hopedale on the basis of the proportion of the annual peak which these communities required,

the amount would be about \$38,150, and total property investment of the two companies would be approximately \$86,110. The figure of \$80,000, however, was thought to be more reasonable. Company officials estimated that earnings of at least 12% on the investment were necessary to provide for depreciation, taxes, and a reasonable rate of return. Exhibit 8 shows the company's estimate of earnings and expenses applicable to sales made through the Brookville Electric Company in 1921.

EXHIBIT 8

BROOKVILLE ELECTRIC COMPANY'S ESTIMATE OF EARNINGS AND
EXPENSES APPLICABLE TO ITS SALES IN 1921

Gross Revenues.....	\$25,157.95
Deductions:	
Energy Charges	
186,916 kilowatt hours at \$.0787 per kilowatt hour...	\$14,710.28
7% Return, Depreciation, and Taxes—12% on \$80,000	9,600.00
	<hr/>
	24,310.28
Balance for Contingencies.....	<hr/>
	\$ 847.67

This was the first time that the Brookville Electric Company had received a request to extend its lines into a rural territory, but the Princeton Power Company had met similar situations several times. It had been the policy of the Princeton Power Company, when making extensions, to give service at the regular rates, but to require the new customers to pay any excess cost of the extensions above the amount upon which the established rate was a fair return, or to guarantee an annual payment to the company of 25% on the investment in the extensions.

The Brookville Electric Company decided to follow this policy, and, therefore, notified the committee that the company would make the four branch extensions if the prospective consumers would pay the difference between the cost of construction and the \$4,000 which the company was willing to invest, or if they would guarantee to the company an annual payment of 25% on the total investment in the line extensions. The committee rejected these proposals, stating that prospective customers would contribute nothing toward the proposed extensions, and informed the company that it would take the matter to the Public Service

Commission unless the company agreed to finance the requested extensions.

In previous cases involving requests for rural extensions, the commission usually had followed the principle set forth in a former decision which read, in part, as follows:

What is or is not a reasonable extension can only be determined from the facts in each case. Where a utility serves a community it should consider its obligation to serve the entire district described in its charter and should so plan its affairs that it will be able to do so. It cannot select and serve only the profitable portions.

The Brookville Electric Company decided to refuse the request of the committee on the ground that the probable revenue from the undeveloped territory would be inadequate in view of the cost of the extensions, and that the company was not in a position to secure funds through the issue of further capital stock or through any other method.

The committee, therefore, took the matter to the Public Service Commission. The company, after studying the policies of public utility commissions of several other states with respect to rural extensions, expressed its willingness to serve the petitioners either under the plan adopted by the Illinois Commerce Commission or under the rules for electric rural extensions laid down by the Railroad Commission of Wisconsin. Adaptations of these plans to the Brookville and Hopedale extensions were worked out and submitted to the Vermont Public Service Commission in support of the company's case. These plans were as follows:

PROPOSITION FOR RURAL SERVICE
WISCONSIN RAILROAD COMMISSION
OUTLINE OF PLAN

Cost Basis of Development

The rural business of an electric utility should be developed on such a basis that it will be self-supporting within a reasonable length of time in order that no undue burden be placed on urban consumers.

Financing by Utility

The plan whereby an electric utility finances all rural extensions and charges a rate commensurate with the cost of service has many advantages, but at the present time this method of financing is impracticable for most utilities, and in such cases the commission cannot reasonably require extensions of lines by the utility.

Financing by Consumers

To encourage the development of rural electric service, not only must the business be permitted to earn the same rate of return as is reasonable for the urban business, but the utility must be permitted to make terms as to financing which will make possible the immediate investment of considerable sums of money in rural extensions without taxing the resources of the utility for securing capital.

Financing by Consumers

In case of rural electric extensions, it is not unreasonable to require the consumer to furnish the cost of the extension of the line.

Financing—Refund Plan

The plan whereby rural electric consumers are required to advance the cost of the line and receive a refund on their service bills, until the amount advanced has been refunded, has the advantage of eliminating the question of financing and permanence of the new business, but does not possess the advantages which result from a high initial charge and comparatively low rates, and it either keeps the utility from part of its legitimate return or makes it necessary to market securities from time to time to take care of the purchase of the line from the consumer on the partial payment plan.

Apportionment of Cost to Various Consumers

While strict justice seems to demand that no consumer should be required to pay more for an electric extension as the member of a group than he would as an individual subscriber, a rural extension should so far as it is practicable be considered a community enterprise in which all will benefit equally.

Financing by Consumers—Partial Payments

A plan by which rural consumers might, in cases of necessity, pay their share of the cost of an extension by partial payments, would be of advantage both to the consumer and to the utility since it would aid in effecting the ultimate development of the rural line as early as possible.

To encourage the development of rural electric service, eliminate the present reluctance of many utilities to engage in this class of business, and enable rural districts to secure service, the business must not only be permitted to earn the same rate of return that is considered reasonable in the urban portion of the utility's business, but the utility must be permitted to make terms as to financing which will make possible the immediate investment of considerable sums of money in rural extensions without taxing the resources of the utility for securing capital.

It is quite likely that under present conditions a utility would be forced to pay a higher rate of interest to secure funds to finance an entire program of rural extensions than the average rural consumer would be required to pay to finance the comparatively small amount

represented by his individual share. As this interest rate would be reflected in the rate paid for service, it is to the advantage of all concerned that the required funds be secured at as low a rate as possible.

The Wisconsin Utilities Law requires that all utilities shall file with, and as part of, their rate schedule all rules which in any manner affect the payments to be made for service, and the rules specified in this order were filed by the companies mentioned in compliance with this provision of the law. Any other rule which complies with the requirements of the utility law, imposes no undue burden on the rural consumer, and provides a return for the utility such that the urban consumer will not be required to carry any deficit which may result from the rural business, will be accepted just as readily for filing.

The application of the rules specified in the order is at the present time being carefully studied by the commission's staff, and changes in these rules will be recommended in case our study indicates that such changes are desirable.

A number of inquiries have been received regarding the basis of the rate proposed by these rules. The intent of the rate is to provide a rural charge which will take care of all the excess fixed charges and operating expenses due to the nature of the rural business, and which will, when paid, place the rural consumers on exactly the same basis as an equivalent urban consumer, and make the urban rate applicable. To cover the fixed charges and excess operating expenses, a return of 10% on the construction cost of the extension is necessary.

This is made up as follows:

Depreciation.....	4%
Taxes.....	1½%
Return.....	2%
Excess Operating Expense.....	2½%

If 10% of the total construction cost is used to determine the annual rural charge, we have duplicated the fixed charges which are covered presumably by the urban rate.

We must deduct, therefore, the normal return, depreciation, and taxes on an amount of construction necessary to serve the average urban consumer. A tabulation of data obtained from valuations and reports of 25 utilities indicates that the average investment in distribution systems is twice the average lighting revenue per consumer. It was considered that average lighting revenue per lighting consumer would represent fairly well the average rural revenue, as the business lighting in the city offsets the small power of the rural consumer.

The usual allowance for the above items is as follows:

Return.....	8%
Depreciation.....	4%
Taxes.....	1½%

We must, therefore, deduct 13½% of the average investment in distribution system per urban consumer to care for this duplication,

and for the purpose of this rule the deduction has been considered as $13\frac{1}{2}\%$ of two times that part of the annual revenue from the extension which is computed at the regular urban rate.

Losses:

It is assumed that the total primary loss, transformer copper loss and secondary loss in rural service, is equivalent to the total losses in urban service.

This leaves the transformer core loss as an excess loss in rural service. This core loss is a steady load and should earn a low rate. Its power factor is low, but the commission felt that no profit should be earned on this portion of the load.

APPLICATION OF WISCONSIN PLAN TO HOPEDALE SITUATION

SECTION NO. 1

Total Cost of Construction Figured on Wisconsin Plan.....	\$4,028.99
Number of Customers on Line Estimated.....	10
Construction Cost per Customer.....	\$ 402.89
Rural Charge—10% of Total Construction.....	\$402.89
Plus Transformer Loss.....	15.75
Total.....	\$418.64
Deduct $13\frac{1}{2}\%$ of the amount the company would spend—	
\$100 per customer.....	135.00
	\$283.64
for 10 customers, or.....	\$ 28.36
per customer per year equals \$2.36 per customer per month	

SECTION NO. 2

Total Cost of Construction Figured on Wisconsin Plan.....	\$5,414.00
Number of Customers on Line Estimated.....	18
Construction Cost per Customer.....	\$ 300.00
Rural Charge—10% of Total Construction.....	\$541.40
Plus Transformer Loss.....	22.26
Total.....	\$563.66
Less $13\frac{1}{2}\%$ of \$1,800.....	243.00
	\$320.66
for 18 customers, or.....	\$ 17.81
per customer per year equals \$1.48 per customer per month	

SECTION NO. 3

Total Cost of Construction Figured on Wisconsin Plan.....	\$2,597.47
Number of Customers on Line Estimated.....	7
Construction Cost per Customer per Year.....	\$ 371.07
Rural Charge—\$25.43 per customer per year, or	
\$2.12 per customer per month	

SECTION NO. 4

Total Cost of Construction Figured on Wisconsin Plan.....	\$5,388.66
Estimated Number of Customers.....	12
Construction Cost per Customer.....	\$ 449.05
Rural Charge—\$33.26 per customer per year, or	
\$2.77 per customer per month	

PROPOSITION FOR RURAL SERVICE

ISSUED BY ILLINOIS COMMERCE COMMISSION

Rules covering the construction, ownership, and maintenance of electric distribution circuits in rural districts and establishing the basis of rates for such service have been issued by the Public Utility Commission of Illinois under General Order No. 59.

CLASSIFICATION OF RURAL CONSUMERS

Rural Consumer Defined. A rural consumer is defined as any consumer, except industrial light and power consumers, located outside of corporate limits of an incorporated municipality.

Rural Consumer Classified. Rural consumers are divided into three classes.

Class 1. Those prospective rural consumers who shall organize a corporation for the purpose of constructing the lines necessary to furnish the service and who propose to render such service to all applicants along the routes of the said lines.

Class 2. Those prospective rural consumers who have formed a corporation, organization, or association of a strictly mutual character for the purpose of operating without profit for the securing of electric service to stockholders alone.

Class 3. Those rural consumers who contemplate receiving electric service as individuals, that is, those consumers who expect the electric utility furnishing the service to furnish a meter for each consumer, and to read these meters and collect each consumer's bill separately.

OUTLINE OF CLASS 3 PLAN

Ownership and Maintenance of Lines. Arrangements must be such that title to lines and equipment, when completed, will rest in the electric public utility and said utility shall be responsible for their maintenance, operation, and replacement.

Additional Customers on Existing Lines. It must be agreed between the utility furnishing the service and the consumers along any proposed distribution line that additional consumers along the route of said line shall receive service if applying for the same upon a non-discriminating basis.

Expense of Construction. Proposed distribution circuits for this class of consumers may be constructed at expense of either the utility or the prospective consumer, according to the rules filed by the electric utility.

Rates to Industrial Rural Consumers. All rates for service to industrial rural consumers shall consist of a service charge in addition to the regular urban rates.

Service Charge. Amount of service charge shall represent the excess cost to the utility of furnishing the rural consumer with the class of service which he demands over the cost to the utility of furnishing

the same service to a like consumer in urban territory, including such items as are ordinarily represented by the minimum bill.

Uniformity of Service Charge. Service charge to each consumer on the same line shall be identical except such portion of the service charge as may vary between individual consumers on account of the difference in size and cost of their transformer and meter installations.

The service charge to consumers on different lines may vary as the expense to the utility of furnishing service over the different lines shall vary.

Rate for Energy Used. The rate for the energy used by individual consumers shall be the same rate, including demand charges, if any, as charged to consumers demanding the same class of service in the municipality from which the service is furnished. Those items ordinarily covered by the minimum bill in urban service are included in the service charge.

APPLICATION OF CLASS 3 TO HOPEDALE SITUATION

We assume an average per consumer of \$25 per year. Company will spend \$100 per customer for extension.³

SECTION NO. 1

Total Length of Line.....	13,000 feet
Number of Consumers Estimated.....	10
Estimated Total Cost.....	\$3,684.70
Company Would Spend.....	1,000.00
Excess Cost.....	\$2,684.70

In other words, the company would spend \$1,000 to serve 10 consumers at our regular filed rate. Additional investment, or \$2,684.70, must be covered by a service charge, which will include Net Return, Taxes, Depreciation, or 13%. On account of additional transformer core loss, we increase this item to 13½%.

Amount to be covered by service charge—

\$2,684.70 × 13½% equals \$36.24 per year to each of 10 customers.

Per month—\$3.02
Or— 3.00

SECTION NO. 2

Total Length of Line.....	16,500 feet
Number of Consumers Estimated.....	18
Estimated Total Cost.....	\$4,993.33
Company Would Spend.....	1,800.00

Excess Cost..... \$3,193.33

Excess cost \$3,193.33 × 13½% equals \$24 per year to each of 18 consumers, or \$2 per month.

³ The ratio of fixed investment to gross income of the Princeton Power Company was approximately 4 to 1. The company, therefore, was willing to spend on the extension four times the estimated gross revenue.

SECTION NO. 3

Total Length of Line.....	8,000 feet
Number of Consumers Estimated.....	7
Estimated Total Cost.....	\$2,374.33
Company Would Spend.....	<u>700.00</u>
Excess Cost.....	\$1,674.33
Excess cost $\$1,674.33 \times 13\frac{1}{2}\%$ equals \$32.29 per year to each of seven consumers, or \$2.69 per month.	

SECTION NO. 4

Total Length of Line.....	16,500 feet
Number of Consumers Estimated.....	12
Estimated Total Cost.....	\$4,908.65
Company Would Spend.....	<u>1,200.00</u>
Excess Cost.....	\$3,708.65
Excess cost $\$3,708.65 \times 13\frac{1}{2}\%$ equals \$41.72 per year to each of 12 consumers, or \$3.48 per month.	
Total Cost.....	\$15,961.01
Company Would Spend.....	<u>4,700.00</u>
Total Excess Cost.....	\$11,261.01
$\$11,261.01 \times 13\frac{1}{2}\%$ equals \$1,520.23, or \$32.24 per year to each of 47 consumers, or \$2.695 per month.	

The Vermont Public Service Commission, however, ordered the Brookville Electric Company to make three of the four extensions asked for by the petitioners, Sections 1, 2, and 3, presented in Exhibit 6, provided the prospective customers would guarantee an annual gross revenue to the company of \$1,300 for at least three years. The commission held that the company should allocate 73%, rather than 80%, of the total nonproduction cost to the small customers, and that the company should class the commercial power customers with the commercial lighting and municipal customers. The commission also made changes in the various items of expense so that these totaled \$101,039 instead of \$118,101.72. The per kilowatt-hour cost which this body arrived at, therefore, was \$0.0220. On the other hand, the commission found that the property investment in the Brookville and Hopedale sales was \$86,110 instead of \$80,000, the company's figure. On this basis, the operating expenses and net return of the Brookville Electric Company would be as shown in Exhibit 9.

The Public Service Commission's estimate would leave, after the payment of the 7% which the lease to the Princeton Power Company provided that the stockholders of the Brookville Electric Company should receive, a net profit of 7.6%, or approximately \$6,500 annually, on the Brookville and Hopedale sales for the lessee.

EXHIBIT 9

PUBLIC SERVICE COMMISSION'S ESTIMATE OF EARNINGS AND EXPENSES
APPLICABLE TO SALES MADE THROUGH THE BROOKVILLE
ELECTRIC COMPANY IN 1921

Gross Revenue.....	\$25,158
Energy Charges 186,916 kilowatt hours at \$0.0488.....	\$9,122
Depreciation and Taxes, 4 % of \$86,110.....	3,444
Operating Expenses.....	12,566
Net Return.....	\$12,592
Per Cent on Property Investment.....	14.6

From figures furnished by the company, the commission found that the Brookville Electric Company's volume of sales each year since 1917 had increased far more rapidly than the company's property investment. On the basis of the 1917 conditions the commission found:

. . . . that the property investment as of December 31, 1921, is 52.4% higher than for December 31, 1917. In 1921, the total number of kilowatt hours sold by the Brookville Electric Company was 160.5% more than in 1917, and the revenue for that year was 162% higher than in 1917. Comparisons of the intervening years show substantially the same general relation existing throughout the period. It is, therefore, evident that the volume of business done each year has increased at a much more rapid rate than the increase in investment necessary in obtaining this additional business. Consider the large amount of new business obtained in the past for a comparatively small investment in connection with the statement of the company that only 47.2% of the dwellings in Hopedale directly available for service are being served. It is then further evident that there must be a large number of prospective customers who can be reached with a small capital outlay, thus assuring the company a field wherein there is opportunity to continue, for some time to come, approximately the same ratio between increased volume of business and increased investment as has existed in the last two or three years.

The commission stressed the fact that the company, by its charter, was organized to furnish service in the towns of Brookville and Hopedale, and that the whole territory which the company was authorized to serve ought to constitute the unit in which the commission required the company to render service, with the provision, however, that the isolated portions of the territory should not receive their service at less than cost and

thereby make it necessary for other portions of the territory to pay excessive or unreasonable rates.

The order of the commission read, in part, as follows:

We shall, therefore, in our order in this case, require that a portion of the extensions asked for be made, but our order will not embrace the section of the town designated as Section 4.

According to computations submitted by the respondent company the distances are as follows:

Section 1.....	13,000 feet
Section 2.....	16,500 feet
Section 3.....	8,000 feet

37,500 feet = 7.1 miles

According to computations of our engineering department, assuming 35 customers, the cost of each mile of construction will be about \$1,577. Seven and one-tenth miles, therefore, will cost \$11,200. The company's officials estimate the cost for this same distance to be \$11,052.36. The company receives an income from the Brookville-Hopedale district on 186,916 kilowatt hours at a cost of \$0.0488 for each kilowatt hour. Eighty per cent of the income received is from lighting customers (residences), according to the company, with the resultant of an average cost for power as follows:

Eighty per cent of 186,916 kilowatt hours = 149,533 kilowatt hours used by lighting customers, of whom there are 787, according to the company's statistics, each thus using as an average 190 kilowatt hours, whose cost at the rate of \$0.0488 amounts to \$9.27 per annum, which cost would gradually diminish as the number of customers increases.

Upon the basis that the newly constructed line will cost \$11,200, a 7% return gives.....	\$ 784.00
4% taxes and depreciation.....	448.00
Cost of current (35 customers at \$9.27).....	324.45
	<hr/>
Revenue (35 customers at \$25).....	\$1,556.45
	<hr/>
Deficit.....	875.00
	<hr/>
	\$ 681.45

It should be borne in mind that there is an individual cost for each customer, consisting of his proportion of the transformer, the service loop, and his individual meter, making it necessary to consider the probable number of customers in reaching a safe estimate of probable cost.

As a corollary to this, it is obvious that the deficit of \$681.45 would not be met by the community by providing 27 new customers at \$25 annual income, because from the \$675 thus obtained must be deducted the cost of current to each customer, amounting, according to our fig-

ures on the basis of \$9.27 each, to \$250.29, to which should be added a reasonable return upon the amount invested by the company for transformer, meter, and other expenses incidental to the installation of each individual service. Hence it will appear that 62 new customers do not collectively bear the burden of the installation of the new line which is embraced in this order.

Assuming the average revenue per electric lighting customer per year to be \$25.21 for Brookville and Hopedale, it would take approximately 106 additional customers at \$25 a year to produce a fair return and equitably meet this situation so far as this particular extension is concerned, and even after taking into account a probable additional revenue from power and municipal lighting, a deficit in the operation of this extension is probable. But when we consider this extension as a part of the Brookville-Hopedale unit, it would appear that a part of this deficit at least can be absorbed by the district as a whole without placing any undue burden upon that portion of the community now being served, or upon the company itself.

Nevertheless, we believe that justice requires our decree to provide that the people of this vicinity shall support this enterprise loyally in order that they and their neighbors may derive the benefits of this service. Accordingly, we feel constrained to require a guaranty of a reasonable use of this new service by the people along the proposed line. Any particular amount required as a guaranty in this or similar cases must of necessity be in the nature of an estimate.

Upon a careful consideration and review of all the facts and circumstances in this particular case, we are of the opinion that a guaranty of \$1,300 annual gross income extended over a period of at least three years would be fair to the company and not an unreasonable requirement to impose upon the prospective customers. In not requiring the other extension asked for, to be made at this time, we do not intend to definitely determine that such extension, or at least a part of it, ought not to be made in the future.

COMMENTARY: This case is an interesting illustration of the practical working of regulation in the public utility field. The refusal of the company to make the extensions was based upon cost allocations which gave a misleading picture of the results which might be expected, because the service of the whole system of the Princeton Power Company was produced at a joint cost and in order to determine whether an extension would result in a profit or a loss, the increment cost method should have been used. This method starts with the whole income and the whole cost of the whole service prior to the extension and proceeds to estimate for each subsequent year the new income that would be received and the new expense that would be incurred if the extension were made. The expenses include only actual out-of-pocket expenses, including the actual cost of the new money and the actual depreciation. If this method had been used, it would have appeared that within a

short time the proposed extensions would probably have increased the company's profit and were therefore justified.

The decision of the commission, while apparently based on the cost allocation method, is obviously influenced by an uneasy feeling that it does not show the whole truth. This appears in the references to the growth of output and income as compared with property investment, and if this line of thought had been followed through, a statement of the real increment costs would have been worked out which would have shown the situation in its true light.

The decision of the commission that the extensions must be made was clearly sound, although the reasons by which it was supported are not convincing.

November, 1929

P. C.

OWENS GAS COMPANY¹

PUBLIC UTILITY—GAS

EXPANSION—*Purchase of Unprofitable Public Utility.* A gas company which was operating at a profit decided to purchase the plant and equipment of an unprofitable utility supplying gas in an adjoining territory and to make additions to its own plant and an extension to one of its pipe lines in order to serve that territory. After making estimates of operating expenses and profits at existing and reduced rates, the company believed that it could make the territory profitable by improving the service. Thereby it could protect itself through diversification of customers against an inevitable business depression in its own territory and against seasonal fluctuations in sales.

SERVICE—IMPROVEMENT OF—*To Promote Sales of Unprofitable Public Utility.* A gas company, which had an opportunity to purchase the plant and equipment of an unprofitable utility supplying gas in an adjoining territory, estimated that the territory could be made profitable through reasonable expenditures for deferred maintenance, which, by improving the service, would improve public relations, and through active solicitation of customers.

(1923)

In July, 1923, the Kensington Gas Company¹ offered to sell its plant and equipment to the Owens Gas Company for \$110,000. The Owens Gas Company supplied gas to Fairfax, an industrial city of 55,000 population. By means of a 4-inch, high-pressure pipe line, this company also furnished gas to Radnor, a town 7 miles from Fairfax in the direction of Kensington.

The Owens Gas Company had a plant capacity of 2,000,000 cubic feet daily, and sold approximately 400,000,000 cubic feet of gas per year at a flat rate of \$1.25 per thousand cubic feet. The company's gross profit in 1922, after the deduction of operating expenses and taxes but before interest and depreciation, had been \$140,000 on a total investment of \$1,250,000. The company paid 9% annual dividends on approximately \$700,000 of common stock; the company had no bonds or notes outstanding. The dividend requirements of the Owens Gas Company were approxi-

¹ Fictitious name.

mately \$64,000 yearly. The company's management was successful and had established friendly relations with the public.

The Kensington Gas Company served two towns: Kensington, 11 miles from Fairfax, with a population of 10,000, and Seymour, with a population of 1,600, 4 miles from Kensington and 15 miles from Fairfax. This company had a plant capacity of 190,000 cubic feet daily, and sold approximately 25,000,000 cubic feet of gas per year. Rates ranged from a maximum of \$3.00 per thousand cubic feet to \$2.20 per thousand cubic feet, the charge to customers using 5,000 cubic feet or more of gas per month. The total investment, as shown by the company's books, was \$180,000. In 1922 the company's operations had resulted in a deficit of \$9,000. The service was so unsatisfactory that many customers had discontinued the use of gas, and the public was antagonistic to the company.

An examination of the Kensington Gas Company's plant showed that the Owens Gas Company could produce gas in Fairfax and transmit it to Kensington from Radnor, through an extension of the existing pipe line to Radnor, at a cost lower than the production cost of the Kensington Gas Company's plant. The main to Radnor, furthermore, was of sufficient capacity to permit the Owens Gas Company to operate that main at a pressure of 60 pounds per square inch and thus to supply gas not only to Kensington but also to Moorhead, through the Moorhead Gas Company,² which wished to purchase 50,000,000 cubic feet of gas annually. Moorhead, a town of 15,000 population, was so situated that the Owens Gas Company could reach it by tapping the proposed pipe line near Kensington.

The distribution system of the Kensington Gas Company required extensive repairs; 20% of the gas produced was unaccounted for because of losses in distribution and errors in metering. The Owens Gas Company believed that it could reduce the quantity of gas unaccounted for from 20% to 10% in three years, if it spent \$22,000 for meter repairs, replacement of mains, and other deferred maintenance. The company expected that gas produced in Fairfax and transmitted to Kensington would have to be enriched to allow for losses in calorific value resulting from high-pressure transmission. In order to sell gas to Moorhead, the company would have to enlarge the Fairfax plant.

² Fictitious name.

OWENS GAS COMPANY

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EXHIBIT I

ESTIMATED FINANCIAL REQUIREMENTS AND RESULTS OF OPERATION OF
OWENS GAS COMPANY WITH MAINTENANCE OF EXISTING RATES

Operation in Fairfax Only	1923	1924	1925
Gross Earnings.....	\$554,480	\$582,000	\$610,000
Operating Expenses.....	401,327	420,000	440,000
Balance.....	\$153,153	\$162,000	\$170,000
Taxes.....	46,600	49,000	51,300
Balance (Gross Profit).....	\$106,553	\$113,000	\$118,700
Cash Requirements (New Capital).....	(\$20,000)	(\$40,000)	(\$60,000)
7% Interest.....	1,400	2,800	4,200
Balance for Dividends and Depreciation. Depreciation.....	\$105,153 27,224	\$110,200 29,100	\$114,500 30,500
Balance for Dividends.....	\$ 77,929	\$ 81,100	\$ 84,000
Approximate Dividends.....	64,000	64,000	64,000
Surplus.....	\$ 13,929	\$ 17,100	\$ 20,000
Operation in Fairfax, Kensington, and Seymour	1923	1924	1925
Gross Earnings.....	\$612,930	\$644,800	\$682,300
Operating Expenses.....	447,027	466,300	487,500
Balance.....	\$165,903	\$178,500	\$194,800
Taxes.....	51,500	54,100	57,300
Balance (Gross Profit).....	\$114,403	\$124,400	\$137,500
Cash Requirements (New Capital).....	(\$180,500)	(\$208,620)	(\$238,670)
7% Interest.....	12,635	14,603	16,707
Balance for Dividends and Depreciation. Depreciation.....	\$101,768 30,647	\$109,797 32,240	\$120,793 34,115
Balance for Dividends.....	\$ 71,121	\$ 77,557	\$ 86,678
Approximate Dividends.....	64,000	64,000	64,000
Surplus.....	\$ 7,121	\$ 13,557	\$ 22,678
Operation in Fairfax, Kensington, and Seymour, with sale of gas to Moorhead	1923	1924	1925
Gross Earnings.....	\$662,430	\$696,500	\$736,000
Operating Expenses.....	476,227	497,000	519,700
Balance.....	\$186,203	\$199,500	\$216,300
Taxes.....	55,500	58,500	61,800
Balance (Gross Profit).....	\$130,703	\$141,000	\$154,500
Cash Requirements (New Capital).....	(\$360,650)	(\$388,770)	(\$418,820)
7% Interest.....	25,246	27,214	29,317
Balance for Dividends and Depreciation. Depreciation.....	\$105,457 33,122	\$113,786 34,825	\$125,183 36,800
Balance for Dividends.....	\$ 72,335	\$ 78,961	\$ 88,383
Approximate Dividends.....	64,000	64,000	64,000
Surplus.....	\$ 8,335	\$ 14,961	\$ 24,383

The executives, however, believed that additional equipment would be necessary in 1925 to insure continuity of service to Fairfax alone. If the company made the purchase, the immediate capital required would be \$180,000, which included \$70,000 for additions to the plant and extensions to the transmission lines in addition to \$110,000, the purchase price of the Kensington Gas Company. The Owens Gas Company could raise this amount by the sale of stock or bonds. Exhibit 1 presents the company's comparative financial estimates, based on the assumption that the company would maintain the existing rates in whatever communities it supplied gas.

If the Owens Gas Company operated only its Fairfax plant, the estimated surplus above interest and dividend requirements was \$13,929 in 1923, \$17,100 in 1924, and \$20,000 in 1925. If the company purchased the Kensington Gas Company's plant and supplied Kensington and Seymour as well as Fairfax with gas, its estimated surplus above interest and dividend requirements was \$7,121 in 1923, \$13,557 in 1924, and \$22,678 in 1925; if, in addition, the company sold gas to Moorhead, the surplus was estimated at \$8,335 in 1923, \$15,061 in 1924, and \$24,383 in 1925.

The Owens Gas Company believed, however, that if it purchased the Kensington Gas Company's plant it might have to reduce the gas rates in Kensington and Seymour because of the pressure of public demand. The company, therefore, prepared comparative financial estimates based on the assumption that it would reduce the rates for gas in Kensington and Seymour so that the range would be from a maximum of \$2.50 a thousand cubic feet to \$1.70 a thousand cubic feet, the charge to customers using 5,000 cubic feet or more of gas a month. Exhibit 2 shows these estimates.

The estimates for the supplying of gas to Fairfax only were, of course, the same as those presented in Exhibit 1. If the Owens Gas Company operated both plants on the basis of a reduced rate at Kensington, the company estimated that it would have a deficit of \$1,041 in 1923, a surplus of \$7,164 in 1924, of \$21,467 in 1925, and of \$25,457 in 1926. If, in addition, the company sold gas to Moorhead, it estimated that it would earn a surplus of \$73 in 1923, of \$8,384 in 1924, of \$22,512 in 1925, and of \$37,400 in 1926. If the company made the purchase and

EXHIBIT 2

ESTIMATED FINANCIAL REQUIREMENTS AND RESULTS OF OPERATION OF
OWENS GAS COMPANY WITH REDUCTION OF RATES
IN KENSINGTON AND SEYMOUR

Operation in Fairfax Only	1923	1924	1925	1926
Gross Earnings.....	\$554,480	\$582,000	\$610,000	\$646,000
Operating Expenses.....	401,327	420,000	440,000	468,000
Balance.....	\$153,153	\$162,000	\$170,000	\$178,000
Taxes.....	46,600	49,000	51,300	54,200
Balance (Gross Profit).....	\$106,553	\$113,000	\$118,700	\$123,800
Cash Requirements (New Capital).....	(\$ 20,000)	(\$ 40,000)	(\$ 60,000)	(\$216,000*)
7 % Interest.....	1,400	2,800	4,200	15,120
Balance for Dividends and Depreciation.....	\$105,153	\$110,200	\$114,500	\$108,680
Depreciation.....	27,224	29,100	30,500	32,330
Balance for Dividends.....	\$ 77,929	\$ 81,100	\$ 84,000	\$ 76,350
Approximate Dividends.....	64,000	64,000	64,000	64,000
Surplus.....	\$ 13,929	\$ 17,100	\$ 20,000	\$ 12,350
Operation in Fairfax, Kensington, and Seymour	1923	1924	1925	1926
Gross Earnings.....	\$603,180	\$642,900	\$696,200	\$741,000
Operating Expenses.....	446,727	470,300	498,600	521,600
Balance.....	\$156,453	\$172,600	\$197,600	\$219,400
Taxes.....	50,700	54,000	58,500	62,400
Balance (Gross Profit).....	\$105,753	\$118,600	\$139,100	\$157,000
Cash Requirements (New Capital).....	(\$180,500)	(\$218,440)	(\$268,900)	(\$434,900*)
7 % Interest.....	12,635	15,291	18,823	30,443
Balance for Dividends and Depreciation.....	\$ 93,118	\$103,309	\$120,277	\$126,557
Depreciation.....	30,159	32,145	34,810	37,100
Balance and Dividends.....	\$ 62,959	\$ 71,164	\$ 85,467	\$ 89,457
Approximate Dividends.....	64,000	64,000	64,000	64,000
Surplus.....	\$ 1,041†	\$ 7,164	\$ 21,467	\$ 25,457
Operation in Fairfax, Kensington, and Seymour, with Sale of Gas to Moorhead	1923	1924	1925	1926
Gross Earnings.....	\$652,680	\$694,300	\$749,100	\$797,000
Operating Expenses.....	475,927	501,000	530,800	555,400
Balance.....	\$176,753	\$193,300	\$218,300	\$241,600
Taxes.....	54,800	58,300	62,900	66,900
Balance (Gross Profit).....	\$121,953	\$135,000	\$155,400	\$174,700
Cash Requirements (New Capital).....	(\$360,650)	(\$398,590)	(\$449,050)	(\$479,050)
7 % Interest.....	25,246	27,901	31,433	33,533
Balance for Dividends and Depreciation.....	\$ 96,707	\$107,099	\$123,967	\$141,167
Depreciation.....	32,634	34,715	37,455	39,800
Balance for Dividends.....	\$ 64,073	\$ 72,384	\$ 86,512	\$101,367
Approximate Dividends.....	64,000	64,000	64,000	64,000
Surplus.....	\$ 73	\$ 8,384	\$ 22,512	\$ 37,367

* Additional gas-producing equipment to be installed.

† Deficit.

reduced the rates, net earnings for two years would be less than those obtainable under existing conditions. After 1924, however, net earnings from sales of gas to Fairfax, Kensington, and

Seymour, or to Fairfax, Kensington, Seymour, and Moorhead, would be greater than those obtainable through the sale of gas to Fairfax only.

The yearly average sale of gas per meter in Kensington in 1922 had been 10,700 cubic feet, and in Fairfax 28,000 cubic feet. The Owens Gas Company believed that by improving the service and by soliciting customers actively, it could increase the sale of gas in Kensington from 20,800,000 cubic feet, the total in 1922, to 25,900,000 in 1924, and that, by reducing the rate to a maximum of \$2.50 per thousand cubic feet, it could increase sales further to 40,300,000 cubic feet in 1924. The number of customers in Kensington and Seymour in 1923 was 1,723.

The Owens Gas Company operated under a permit from the state legislature to supply gas to Fairfax, and the Kensington Gas Company had similar permits to operate in Kensington and Seymour. The only authority necessary for the Owens Gas Company to own and operate the Kensington Gas Company was the approval of the Public Utilities Commission; the company expected no difficulty in obtaining this approval. In fact, the commission favored the plan because it was a method of improving the service in Kensington.

Because of serious labor conditions, the industries of Fairfax were operating below normal and many small manufacturing companies had moved to other communities. A serious depression was inevitable, and its effects probably would last several years. The Owens Gas Company, therefore, looked upon an extension of service to Kensington and Moorhead as a means of counteracting decreased earnings in Fairfax. The immediate results were uncertain, but the extension of service to a larger territory would increase the diversity of industrial users, and would reduce seasonal fluctuations in gas sales.

The Owens Gas Company estimated that the distribution lines in Kensington and Seymour were worth nearly \$110,000, which was the price of both the lines and the plant. Only a minor reduction in the assets account, consequently, would be necessary if, because of the relatively high operating costs of the plant at Kensington, the company decided to use that plant only to store and recompress gas for distribution in Seymour.

The Owens Gas Company secured the approval of the Public Utilities Commission to purchase the plant and equipment of the

Kensington Gas Company, and bought them in November, 1923, with proceeds from the sale of capital stock. The Owens Gas Company extended the line from Radnor, and supplied gas to Kensington and Seymour from the plant in Fairfax after February, 1924. The executives decided not to reduce the rates immediately, but they made active efforts to secure new customers. The company improved the quality of gas, maintained more nearly constant pressure, and kept records of operation carefully, in order, if possible, to reduce the rates after a year's operation. The company made a contract to furnish gas to the Moorhead Gas Company, and increased the plant in Fairfax in order to supply the new territories. The company succeeded in gradually improving relations with the customers in Kensington and Seymour.

COMMENTARY: The statement of facts in this case is incomplete. Other factors entered into the decision here recorded, but the facts given are perhaps adequate to support the conclusion. It illustrates the point commonly overlooked, that these public utility monopolies do not in fact act as we should expect a monopoly to do. The economist's theory of monopoly power is that it will be exercised to limit production and thereby control price. This theory is based upon the hypothesis that conditions in the business are static or that the period of monopoly control will be brief. With our public utility monopolies neither assumption holds. The possible expansion of the business is usually very great, and the period of monopoly control is unlimited. Under these conditions, the public utility companies have commonly acted as competitive industries do. They have expanded their production rapidly, and in order to sell the output have reduced prices sometimes beyond the limit of prudence.

January, 1927

P. C.

SEARS, ROEBUCK AND COMPANY

MAIL-ORDER COMPANY

EXPANSION—*Establishment of Retail Chain Stores to Supplement Mail-order Business.* Because of a relative decline in the rural population as compared with the total population of the United States and because of changes in the buying habits of the rural population, brought about by increased transportation facilities, a large mail-order company did not anticipate further expansion in its total volume of sales in agricultural communities. Believing that the decline of mail-order business in rural districts could be offset by the establishment of retail stores in cities, the company decided to establish a chain of retail stores to supplement and expand its mail-order business.

LOCATION—*Size of City as Factor in Selection of Site.* A large mail-order company which had decided to establish a chain of retail stores, believed that stores located in cities would not encroach upon the company's mail-order business in rural communities and that a few large stores could be established with greater ease than many small ones. The company also believed that it would not be practical for stores in small towns to carry large selections of merchandise because of the danger of a slow rate of stock-turn. For these reasons and because shipping costs to cities were believed to be lower than to towns, the company adopted a policy of establishing its stores in cities of over 50,000 population.

LOCATION—*Selection of Site within a Given City.* A large mail-order company which had undertaken the establishment of a chain of retail stores in cities with population of over 50,000, within the cities selected decided to choose sites, away from shopping centers, that would be convenient for customers to reach by automobile and where free parking space could be provided. The company preferred districts with a high percentage of home ownership to total homes, a moderately high rate of earning power, and a predominantly white population.

(1928)

In 1925, executives of Sears, Roebuck and Company decided to establish a chain of retail stores in order to supplement and to expand the company's mail-order business.¹ In 1927, the com-

¹ Net Sales of Sears, Roebuck and Company:

1910.....	\$ 61,329,792	1923.....	\$198,482,946
1914.....	96,024,754	1924.....	206,430,527
1918.....	181,896,428	1925.....	243,798,351
1919.....	234,242,337	1926.....	258,212,751
1922.....	166,514,110	1927.....	268,731,794

pany began the actual establishment of these stores. The new policy was inaugurated after the executives had made a survey of the trends of sales in the mail-order business and an appraisal of the probable effects of the retail stores on the volume of mail-order sales. This latter problem they had considered partially in connection with questions of location policy, such as whether to establish stores in large or small cities or towns, and what type of site to select within a given city or town. In July, 1928, the company expected to have approximately 213 stores in operation before the end of the year.

For several years the company had operated retail department stores in its mail-order houses² and a number of stores, not organized in a chain, selling tires and automobile accessories. The operation of these stores had given the company some retail store experience. The question of establishing a chain of retail stores, however, had been taken up apart from a consideration of the stores already existing.

In establishing a chain of retail stores, the purpose of the executives was to adjust their policies in accordance with the slowly developing and varying trends of sales in the mail-order business. Prior to 1927, Sears, Roebuck and Company had found its markets primarily among agricultural communities and had made little effort to develop urban markets. While the company's net sales had increased from \$166,514,110 in 1922 to \$268,731,794 in 1927, still the president did not foresee a continuance of this trend if the company restricted itself to the markets in agricultural communities.

By the time of the World War, there had developed in the United States increasing evidence of a relative decline, and, in some sections, an absolute decline, in the rural population as compared with the total population. In the opinion of the president, development of new and improved machinery for farm use had increased the per capita production of the rural population and had made it possible for some of the younger generation to go to the cities. Though Sears, Roebuck and Company's sales

² The mail-order house was a distributing point, consisting of a warehouse for the mail-order stocks for the territory, the offices of the operating and merchandising divisions for mail-order distribution in the territory, and usually a retail department store. Under the proposed policy of a chain of retail stores, the mail-order house would be the headquarters of the operating and merchandising divisions for retail distribution and would contain reserve stocks for the retail stores.

of some items to farmers probably would increase, in 1927 the president did not anticipate further expansion in the total volume of sales to agricultural districts.

There were in progress, moreover, changes in the buying habits of the rural population. Good roads had made it possible for farmers and their families to go to town more often than formerly, and they were making an increasing share of their total purchases in retail stores.

Another change which some of the executives stated to be in process was a reduction in the percentage of style merchandise sold by mail order to total sales by mail order. The advantage which mail-order companies had had in introducing styles in rural communities had disappeared. Formerly the rural customer had found in the mail-order catalog a wider and more up-to-date selection of style merchandise than that carried by the nearby store. Now, however, the rural buyer could go by automobile to larger towns, where he could secure merchandise which was more up-to-date than that of the mail-order catalog. Customers were demanding current city styles; and they realized that mail-order companies in compiling their catalogs must anticipate styles fully six months in advance of the season, and that, therefore, their styles might not be so up-to-date as those offered in the department stores of large towns and cities. On the other hand, the percentage of sales of heavy lines of merchandise such as tires, sporting goods, vacuum cleaners, electrical implements, and radios was increasing. The percentage of yard goods sales had remained about the same.

The executives reasoned that the natural decline of the mail-order business in rural districts could be offset, and perhaps more than offset, by the establishment of retail stores. In some cases the retail stores would prove to be feeders to the mail-order business. Once a customer had visited a Sears, Roebuck and Company retail store and had observed the quality of merchandise, he would be willing to buy other merchandise shown in the mail-order catalog but not exhibited in the store.

Through the development of the chain of retail stores, Sears, Roebuck and Company not only planned to stimulate its old business, but, by establishing its stores in cities, expected to secure a large amount of new business. Although the company had operated retail stores in its mail-order houses, it had made no

major effort to procure a share of the growing city and large-town business. Furthermore, because it believed that stores located in cities would not encroach upon the mail-order business in the rural communities and that a few large stores could be established with greater ease than many small stores, the company adopted a definite policy of avoiding small towns for its store locations.

There was another distinct disadvantage to operating stores in small towns, so one executive stated, in that it was not practical for such stores to carry large selections of merchandise because of the danger of a slow rate of stock-turn. The risk of doing business he considered to be greater in small towns than in cities. In a small-town store the manager would have little choice in disposing of excess merchandise or merchandise not suited to the needs of regular customers; because of the limited buying power of consumers in a small community, he would be obliged to ship such merchandise to another store instead of selling it at marked down prices, as a city store manager could do. The absorptive capacity of a city market would be greater than that of a town; for example, merchandise not salable at the regular price could be sold in a city at a lower price without noticeably impairing the market for more readily salable merchandise of the same type. In a city, too, there would be more classes of people to which different types of merchandise could be sold. It was true, on the other hand, that in a city price competition would be keener, for there more stores advertised that they were not undersold. Shipping costs to cities would be lower, since most shipments could be made in carload lots, whereas to small towns shipments often would move at less-than-carload-lot rates. At the outset, furthermore, the management expected that with the existing organization, establishment and control of several large stores would prove to be less difficult than of numerous small stores.

With these considerations in mind, the company began the establishment of its stores. The executives planned to have stores of two general types, designated Class A and Class B, while stores carrying fewer lines than these two were to be called A— and B—. Class A stores generally were to be located in cities with populations of 150,000 or more. Of the 35,000 items in the catalog, about half would be stocked in the large Class A stores. Class B stores for the most part were to be located in towns with popu-

lations of 50,000 or more, though there might be exceptions, and were to carry fewer items than did the Class A stores.

The selection of cities in which to establish the new stores was a major consideration. The company had about 10 mail-order houses located throughout the country in strategic points for distribution. It was decided that each mail-order house would be a control point for the stores in the district which the house served. The retail stores which the company had maintained for some time in its mail-order houses in Chicago, Los Angeles, Philadelphia, Kansas City, Dallas, Memphis, Atlanta, Boston, Minneapolis, and Seattle were designated as Class A stores, and in some of those cities one, two, or, as in the case of Chicago, three more stores were established. Other stores were established in cities not far distant from the control points. As later stores were established, their distance from the control point gradually was extended.

In choosing between cities for a location, consideration was given to the relative merits of available sites, the populations of the cities and their characteristics, relative wage scales, and the savings habits of the people. The management believed, for example, that a thrifty community with a high wage scale was a suitable location.

Within a given city the company selected a site that would be convenient for customers. Executives of the company favored suburban locations with good transportation facilities and reasonably priced land. They wanted to make it possible for customers to avoid traffic congestion in coming to the stores and to provide them with free parking space. A location on an automobile artery was considered more desirable than one on a street car line. Since the company had found through experience that the percentage of actual buyers to total persons entering the store was greater in its retail stores than in the average department store and that its stores did not appeal strictly to the shopping habit, the executives disregarded locations of other chain stores and of shopping centers. In fact, they sought locations away from shopping centers, expecting to attract men, as some of the company's best values were in men's lines. The executives believed that men would come to a suburban store out of the shopping district, especially if it were convenient to them by automobile transportation.

In selecting a site in a given city, the real estate officers of the company first analyzed by wards the average income, the number of apartment houses, and the racial distribution, with particular regard to the proportion of negroes to whites. The management preferred a district where the percentage of home ownership to total homes was high, where the earning power was moderately high, and the population was predominantly white. Traffic counts also were made on different traffic arteries.

Primarily because they found it difficult to secure proper sites with suitable buildings already erected on them, the executives adopted the policy of buying sites and erecting buildings for the Class A stores. They anticipated that shopping centers would eventually develop around their stores and that the land values of the store sites and of the surrounding districts would be enhanced. By owning its buildings, furthermore, the company would preclude future increases in rentals of leased properties and thus save for its own stockholders such gains as the management anticipated.

Class B stores were leased, because for these stores it was possible to find suitable buildings in locations which were satisfactory. Leases were from 2 to 10 years in length.

The building plans of the company were not completely standardized. Architects of the company endeavored to adapt the architecture of each building to the neighborhood in which the building was erected. The internal layouts of the stores were made similar in so far as the floor plan and the area and shape of each particular site made this standardization possible. Generally speaking, the same departments were located alike in all the stores.

A typical list of departments for a Class A store was as follows:

Furniture	Paint
Stationery	Men's furnishings
Jewelry and silverware	Lighting fixtures
Sporting goods	Crockery
Drugs	Cotton piece goods, domestics
Hardware and household supplies	Floor covering
Musical instruments	Lingerie
Luggage	Boys' clothing
Silks and woolens	Plumbing and heating
Shoes	Men's clothing
Hosiery	Pianos and phonographs
Ladies' ready-to-wear	Toys
Corsets	Wall paper
Linens, towels	Radios

Stoves
Blankets, draperies
Notions
Washing machines
Infants' wear

Millinery
Candy and tobacco
Tires
Automobile accessories

Most of these stores carried style goods; for example, they were to display about 75% of the catalog line of coats in the fall season of 1928.

A typical Class B store had the following departments:

Sporting goods
Hardware and household supplies
Stoves
Blankets
Washing machines
Automobile accessories
Work clothing

Plumbing and heating
Toys
Wall paper
Radios
Tires
Paint

Some Class B stores of the lowest grade, however, carried only tires and automobile accessories, while others carried this merchandise and also radios and some lines of hardware. These stores had developed from the former Class C store, which had sold only tires and automobile accessories. The Class C stores had been discontinued or made into Class B units. On the other hand, some Class B stores carried all the items of a Class A store except the style merchandise. The company expected to have 38 Class A to A— stores and 175 Class B to B— stores in operation by the end of 1928.

In each store the merchandise selected for display was chosen with regard to the type of community in which the store was located. Some catalog merchandise was excluded because it was not adapted to urban requirements. On the other hand, the retail stores carried some items, called specials, which did not appear in the catalog.

There were fewer price lines in the retail stores than in the mail-order divisions, because the company's officers considered that slight price differentials, which constituted a shopping appeal in mail-order buying, did not measure wide enough differences in the quality of the merchandise to influence customers who could see the merchandise.³

³ For commentary, see page 232.

MONTGOMERY WARD AND COMPANY¹

MAIL-ORDER COMPANY

EXPANSION—*Establishment of Retail Chain Stores to Supplement Mail-order Business.* A large mail-order company, wishing to adapt its merchandising methods to suit the changing buying habits of consumers and also to overcome consumers' reluctance to order merchandise without seeing the articles, decided to establish a chain of retail stores. The company expected that the retail stores, by creating new customers and by making more secure the relations between old customers and the company, would contribute to the growth of the mail-order business itself.

LOCATION—*Selection of Site.* A large mail-order company which had decided to establish a chain of retail stores, in deciding upon the location of the stores, selected towns which were on a direct route from one of the company's mail-order houses and which were easily accessible by highways from the surrounding country, believing that the success of a store would depend upon the amount of rural trade in the town. In general, the stores were located in towns of less than 50,000 population. Within a selected town, the company desired a site on a street or highway leading from the business section of the town to the state and county roads outside, and one which allowed adequate space for parking.
(1928)

By August, 1928, Montgomery Ward and Company had established in towns and small cities the first 112 of its proposed chain of 1,500 retail stores. The company had entered the retail chain store business both to take advantage of the changed buying habits of consumers and to overcome an outstanding weakness in mail-order selling.

In the opinion of the president,² the change in selling methods had been a logical step in the development of Montgomery Ward and Company. Having in mind that the primary function of the company was the economical distribution of merchandise, not necessarily mail-order selling, he had sponsored the formation

¹ The data of this case were obtained from published sources, particularly: *Chain Store Age*, April, 1928, Volume 4, No. 4, "What Our Chain Store Program Embraces," an interview with George B. Everitt, president, Montgomery Ward and Company; *Forbes*, September 1, 1928, Volume 22, No. 5, "Chain Stores Face Mail-order Invasion," by Neil M. Clark; *Forward*, a house organ of Montgomery Ward and Company, June, July, and August, 1928.

² *Forbes*, September 1, 1928, "Chain Stores Face Mail-order Invasion," p. 13.

of the chain. The establishment of retail stores in strategic locations he considered to be the best of a number of possible modifications of mail-order selling. If house-to-house canvassing, however, or any other method of retail selling had appeared to be a more economical method of distribution, he saw no inherent reason why Montgomery Ward and Company should not have chosen it rather than chain-store selling. The method of distribution seemed less important to him than the end.

For several years the executives of the company had considered and experimented with merchandising methods. They wished to adapt the company's merchandising methods to suit the changing buying habits of consumers, and also to overcome consumers' reluctance to order merchandise without seeing it. Although unlimited guaranties and the reputation of the mail-order company for fair dealing had done much to break down this hesitancy, many people, unquestionably, still preferred to buy only after inspection, especially when the article under consideration was costly.

Merchandise display trains had once been sent about the country as a step in overcoming this latter objection. These trains had carried a variety of merchandise, and had made scheduled and fully advertised stops in many communities. The purpose of these stops had been to let people see for themselves the quality of some of the merchandise pictured in the catalog, rather than to make actual sales. Ordinarily an increase in mail-order sales had followed in the communities visited by the train. The company also had displayed its merchandise at various state fairs.

Such efforts as the above, however, had been sporadic. In 1926, the executives had come to the conclusion that permanent displays at strategic points might produce better results. After they had considered 86 towns as possible locations for the first permanent display store, they had selected Marysville, Kansas, a county seat town with a population of 4,000. The Marysville store had been opened on August 14, 1926; a month later a second store had been opened at Plymouth, Indiana; and a third store had been opened in Minnesota in October of the same year.

The results in these stores had convinced the executives that the company should establish a chain of stores. Merchandise in the display stores had been for inspection and not for sale

over the counter, except in the case of automobile tires, tubes, and batteries. A demand among customers that the company sell at retail in the stores had soon developed. After a study of the frequency and urgency of these requests, the executives had considered the probable effect of direct store distribution on the mail-order business,³ as well as the type of communities in which the company should open stores.

The chain store development⁴ of Montgomery Ward and Company was undertaken, not to supplant the mail-order business, but to supplement it. The company expected that the retail stores, by creating new customers and by making more secure the relations between old customers and the company, would contribute to the growth of the mail-order business itself.

The president's views on distribution problems and the position of the mail-order company as a channel of distribution were summarized as follows:⁵

Old barriers in distribution are admittedly breaking down. The familiar line-up of former days (manufacturer-to-wholesaler-to-retailer-to-consumer) has long since been variously modified, and there have been changes, too, in the character of retail stores as to classes of goods carried: druggists stock an immense variety, grocers are encroaching on the cigar-store field, and so on.

There is no evidence to show that the old methods are going to disappear, but the day has already arrived when they must stand in competition with newer methods, and nobody knows all the possibilities of the situation, nor what the final outcome may be.

This much is clear to me: the mail-order business, as a distinctive mode of distribution, is in no danger. Mail-order selling can survive in the automobile and radio era, is surviving, and is actually in a healthier state today than ever before.

³ Montgomery Ward and Company's annual sales:

1912.....	\$ 35,000,000
1914.....	41,042,486
1918.....	76,166,848
1919.....	99,336,053
1922.....	84,738,826
1923.....	123,702,043
1924.....	150,045,065
1925.....	170,592,642
1926.....	183,800,865
1927.....	186,683,340

⁴ Retail stores which carried all the items in the catalog had been operated for several years in connection with the mail-order houses, the company's distributing points. These stores, however, were not a part of the chain store development, though their operation, prior to the Marysville experiment, had given the organization of the company "over-the-counter" retail experience.

⁵ *Forbes*, September 1, 1928, "Chain Stores Face Mail-order Invasion," pp. 13-14.

Although the executives did not expect the chain stores to supplant the mail-order business, they decided to locate the initial stores, at least, in communities where there were enough mail-order customers to support a store as soon as it was established. The typical store carried only from 1,500 to 3,000 items out of the 33,000 shown in the catalog. It was expected that, as a result of a carefully selected stock, each chain store would make its own expenses and a profit on the merchandise sold.

Another factor in the selection of the towns in which stores were established was that of transportation. Each of the new stores was on a direct route from one of the company's mail-order houses,⁶ either by rail or by truck transportation, in order to insure prompt and economical stock servicing, to facilitate supervision of the stores, and to insure economical routing of field men.

The executives of Montgomery Ward and Company favored for a store location a town which was easily accessible by highways, since they believed that the probability of the success of a store depended upon the amount of rural trade in the town. Even for a town rated high as a possible location on the basis of rural trade, a special investigation was made of highway conditions.

The company believed, furthermore, that it should establish stores only in communities in which commercial organizations and business men, as well as probable customers, would welcome such a store.

After the town had been selected, the next problem was to find a site or building. The company did not seek primarily a location with the highest traffic count in the town or a location on the main street. It desired a site on a street or highway leading from the business section of the town to the state and county roads outside. The company sought a building or site near which there was adequate space for parking, also. In numerous small communities, desirable locations could be secured not far distant from the main shopping centers.

The first 44 stores were distributed in towns and cities with populations in 1920 as shown in Exhibit 1.

⁶ The company had nine mail-order houses, in central locations throughout the country. Each mail-order house contained a warehouse for mail-order stocks and reserve stocks for retail stores; offices for the operating and merchandising organizations of the mail-order and retail store divisions for the territory; and a retail department store.

EXHIBIT 1

FIRST 44 CHAIN STORES OF MONTGOMERY WARD AND COMPANY, BY
SIZE OF CITY, 1920 CENSUS

Size of City	Number of Stores
Below 5,000.....	6
5,000- 9,999.....	6
10,000-14,999.....	10
15,000-19,999.....	4
20,000-24,999.....	2
25,000-49,000.....	15
Over 100,000.....	1
Total.....	44

The first 44 stores were opened between September 1, 1927, and March 1, 1928. Sixty-eight more stores were added to the chain between March 1 and the end of July, 1928.

EXHIBIT 2

CHAIN STORES OF MONTGOMERY WARD AND COMPANY, BY STATES,
JULY, 1928

State	Number of Stores	State	Number of Stores
Alabama.....	1	Nebraska.....	4
California.....	18	North Dakota.....	3
Colorado.....	1	New York.....	1
Idaho.....	1	North Carolina.....	7
Illinois.....	9	Nevada.....	1
Indiana.....	9	Oklahoma.....	5
Iowa.....	5	Oregon.....	3
Georgia.....	1	Ohio.....	5
Kansas.....	6	Pennsylvania.....	7
Missouri.....	1	South Dakota.....	1
Michigan.....	3	Texas.....	7
Montana.....	1	West Virginia.....	3
Minnesota.....	2	Washington.....	4
Maryland.....	1	Wisconsin.....	2
		Total.....	112

These 112 stores were located in 28 states, as shown in Exhibit 2, and in towns and cities with populations as indicated in Exhibit 3.

EXHIBIT 3

CHAIN STORES OF MONTGOMERY WARD AND COMPANY, JULY, 1928,
BY SIZE OF CITY, 1920 CENSUS

Size of City	Number of Stores
Below 5,000.....	13
5,000- 9,999.....	22
10,000-14,999.....	24
15,000-19,999.....	13
20,000-24,999.....	8
25,000-49,999.....	21
50,000-99,999.....	10
Over 100,000.....	1
Total.....	112

Each of the communities selected for a store was studied in order to determine which items of merchandise were adapted to the needs and requirements of the people in that community. The first few chain stores established did not carry more than 10% of the catalog items and there was a tendency, as in the original display stores, to concentrate on the "high ticket" merchandise, articles selling at about \$25 or more. Salespeople in the stores, who always had catalogs at hand for reference in case merchandise not in stock was called for, frequently filled out mail-order blanks for customers.

By July, 1928, available figures proved to the satisfaction of the executives that there was an interplay of demand creation factors between the new chain stores and the mail-order houses. The president stated that, instead of the chain stores' reducing the volume of mail-order sales, mail orders had increased in each locality in which the company had a store.

SEARS, ROEBUCK AND COMPANY¹MONTGOMERY WARD AND COMPANY²

COMMENTARY: The over-the-counter retail expansion of the two outstanding mail-order companies of the United States was a departure from their traditional policy of selling by mail. Was a modification in the method of retail selling desirable? How would the new plans affect the mail-order business? Could these two companies successfully maintain and promote both mail-order selling and over-the-counter retail selling? These and kindred questions were brought to the fore

¹ See page 220.

² See page 227.

when Sears, Roebuck and Company and Montgomery Ward and Company announced their expansion programs.

Both companies had a substantial volume of sales; their recovery from the 1920-1921 depression had been satisfactory; new sales records were being established. Short-run considerations, then, hardly justified the new policies; long-run factors such as the probable future of the mail-order business and new opportunities for profit furnish the tests of the soundness of the expansion programs of the two companies.

Mail-order sales of the past were the result in part of a set of economic and social conditions which today are being modified. There was the large rural population with poor transportation facilities; access to markets was difficult for these people. Even when they did go to town, they found that the country merchants did not carry up-to-date merchandise. In fact, the mail-order catalog gave the rural buyer a wider range of up-to-date merchandise from which to select than did the typical small town stores; there was, moreover, the additional opportunity to shop or make comparisons within the catalog of one company or between the catalogs of both companies. In addition to these advantages, the mail-order buyer often found catalog prices lower than local prices even after making allowance for freight, express, or postage. In many sections of the country there was no real retail competition between the mail-order company and the local retail store. But, today, improved transportation—roads and automobiles—has made it possible for mail-order customers conveniently to reach larger market centers than before. Improved communication—through the growth of national advertising, the increased circulation of magazines, especially women's magazines, the development of radio, and the development of motion pictures on a national scale—has helped to modify the wants of the people and has speeded up the style cycle. Seasonable style merchandise for many rural customers now is found more usually in the retail store than in the mail-order catalog. Furthermore, the opportunity to make comparisons within and between stores where the merchandise can be seen and examined is a more potent patronage appeal than the shopping lure of the mail-order catalogs.

The change in economic conditions, with its effect on the buying habits of mail-order customers, was a fundamental fact with which the mail-order companies had to cope. Add to that the natural reluctance of many potential customers to buy without seeing the merchandise, and a potent argument for some form of modification of the mail-order business was apparent. The original display stores of Montgomery Ward and Company seem to have been planned with such thoughts in mind.

Even though the mail-order sales of style merchandise declined, these companies were able to offset this decline by increased sales of other

lines, such as tires, hardware, and radios. If the mail-order companies were certain of success in substituting new lines for old ones the sales volume of which had declined, thus maintaining sales volume and utilizing present plant capacity and personnel, they need not have developed new types of outlets as a means of protecting their competitive position, unless they deemed these new outlets to be a more profitable expenditure of effort and money. It is a well known fact that some sales come relatively easily by mail-order methods; however, it is equally well known that after the easy sales, the cost of stimulating additional volume mounts rapidly: the law of diminishing returns asserts itself. The mail-order companies perhaps had evidence that additional volume might be secured more cheaply by over-the-counter methods than by mail-order methods, and therefore chose the former course so as to utilize unused productive resources (in plant capacity and personnel) to the added profit of stockholders.

Another weakness of the mail-order position, which was clearly demonstrated in the 1920-1921 depression, was the inflexibility of mail-order prices. Mail-order companies practically were required to maintain stocks for the life of their catalogs, and on a rising market they usually maintained prices also. In periods of falling prices, like other merchants they took mark-downs. Even though they advertised that in a falling market merchandise was sold at the prevailing market price, which was normally lower than catalog prices, still customers were reluctant to continue buying. The advertised mail-order mark-down did not seem so real or genuine to a customer as the lowered price ticket visible in a retail store; therefore, many people purchased merchandise in retail stores rather than through the mail-order companies. These companies suffered lowered volume of sales and also had to take large mark-downs on inventories in stock when a new catalog was announced. With a chain of stores in close touch with the consumer, the mail-order companies can better demonstrate their price policy in a falling market than formerly; lowered prices in the stores should establish confidence in the statement that catalog merchandise also is reduced.

On the other hand, the retail stores themselves may have inflexible prices. In mail-order territories, customers of the stores in many cases will compare mail-order catalog prices with those of the chain stores of the mail-order company, as well as with those of competing retail stores. Unless the chain stores are divorced completely from the mail-order business, there is a possibility that the catalog will hamper price adjustments in the stores.

Nevertheless, some form of over-the-counter retailing for these mail-order houses was a sound departure from established policy, in order to enable them to cope with the changed buying

habits of consumers and to maintain their competitive positions in retail trade.

Since these companies were dealing with long-time trends in retail trade, they should not have adopted any policy which would seriously endanger their already large and profitable mail-order business. Rather, they should have adopted a plan of expansion that would supplement the mail-order business and still be in line with the currents of retail trade, and that also would enable the companies to take up the slack in the mail-order sales when this slack developed. At the outset they should have avoided internal competition between types of retail selling as much as possible. In view of these criteria, the expansion policy of Sears, Roebuck and Company seems sounder than that of Montgomery Ward and Company.

In subsequent discussion, while comparing and appraising different aspects of the programs of the two companies, a rather clear differentiation in their policies is desirable. With respect to the type of communities in which stores were established, the two companies had exactly opposite policies. Sears, Roebuck and Company, on the one hand, desired to reach new markets—urban consumers with whom it had done little business previously. Montgomery Ward and Company, on the other hand, made its initial efforts in communities in which and around which were many mail-order customers. Sears, Roebuck and Company preferred communities above 50,000 population; Montgomery Ward and Company concentrated its efforts in cities of less than 50,000. By restricting the number of items carried in the individual store, Montgomery Ward and Company expected to demonstrate the quality and values of mail-order merchandise and thus secure orders for items not carried in the store; the lines carried within the store were deemed sufficient to carry the overhead of the retail store. Both companies, then, made an effort to protect existing volume of sales by mail, but the policy of Sears, Roebuck and Company in choosing the larger marketing center was the sounder policy, from the point of view both of building new business and of protecting existing mail-order volume.

Sears, Roebuck and Company's general policy of locating both its Class A and its Class B stores in cities of over 50,000 was a step in line with current retail developments, that is, the trek of trade to larger marketing centers. Montgomery Ward and Company in locating its stores also recognized this retail trend by establishing its stores in flourishing county seat towns and other important trading centers.³

³ A detailed description of this development may be found in Dr. M. T. Copeland's chapter on Marketing in *Recent Economic Changes*, McGraw-Hill Book Company, Inc., New York, 1929.

The main problems which this company will face are likely to arise from its policy of invading with retail stores its existing mail-order territory. In the first display stores of Montgomery Ward and Company, customers made demands for immediate delivery on merchandise shown; perhaps in the new chain stores customers will demand immediate delivery on more items and will request that more items be stocked in the stores. If this demand develops, and it is not unreasonable to believe that it may, Montgomery Ward and Company either will have to meet it or will be faced with the possibility of dissatisfied customers who will try to buy from nearby retail stores. What business the chain stores get then would come on a strictly price basis. Though Montgomery Ward and Company reports that its chain stores stimulate mail-order sales, it is unsafe to conclude that this condition of affairs is necessarily a permanent one. There may be, it is true, increased sales on the merchandise displayed in the stores which would not occur if only mail-order methods were used. The commentator believes, nevertheless, that both companies should engage in over-the-counter retail expansion only on the theory that, where such stores exist, they will constitute the chief source of trade in the territory. That retail stores will prove permanently to be profitable feeders to the mail-order business is, in his opinion, a false premise.

In the case of Montgomery Ward and Company there is the further possibility that the company will incur two overheads—that of the mail-order house and that of the store—to get the same or only slightly increased volume of business. The question of two overheads involves the offset of losses against gains. For some time to come, the mail-order catalog must be issued; the cost of personal selling in the stores is, therefore, a partial duplication of selling expense. There is the rent of the stores which may, it is true, be offset by added sales volume. Packing and handling expense for merchandise sold at the stores probably will be higher than that for merchandise sold by mail order, because the merchandise is packed and shipped oftentimes twice instead of once. Merchandise received in large lots at the mail-order houses must be broken up and repacked in smaller lots for nearby retail chain stores. At the store this same merchandise will be unpacked and sold in small retail lots. This disadvantage of handling may be overcome, however, by direct shipment to the stores from the sources of supply.

Though Sears, Roebuck and Company's policy with respect to choice of markets to develop be considered superior to that of Montgomery Ward and Company, still Sears, Roebuck and Company's detailed plans for location of its stores within the proper market seem to contain an element of hazard. Montgomery Ward and Company stores are located somewhere near the local shopping district of each community.

Class B stores of Sears, Roebuck and Company vary from a location close to the shopping center of a town to one some distance away. The location of the Class A stores is outside and at some distance from the usual shopping district. It is this latter policy to which attention is directed. Sears, Roebuck and Company makes an appeal to the convenience of the customer, particularly of those who come by automobile. The policy of the company is in definite conflict with the established shopping habits of urban department store customers. With department stores close together in narrowly restricted shopping districts the habit has developed among women of making comparisons between stores before making purchases. The stores of Sears, Roebuck and Company are so far removed from the shopping districts that comparisons between its merchandise and that of other stores is not easy, and therefore its stores must rely on some other appeal than that of shopping to draw patronage.

Convenience is one appeal that admittedly is becoming more important in the ever increasingly crowded conditions of cities. Yet the opportunity to make comparisons is in the main a stronger appeal than that of convenience and lack of crowds. For the present at least, Sears, Roebuck and Company must justify its location policy on the exception principle. In large communities or trading areas there may be enough people who prefer the convenience appeal to justify one institution of the type of the Class A store. Even though this possibility be admitted, the fact still remains that so far as store location is concerned, the policy of Sears, Roebuck and Company is more risky than that of Montgomery Ward and Company.

Best values—the lowest price for a given grade of merchandise—is another patronage appeal which the Sears, Roebuck and Company stores make to the department store customer. Sears, Roebuck and Company is new to most consumers in the territories served by these stores and, though the name of the concern does have a goodwill value (enough to get the sophisticated city buyer into the store once or perhaps two times), still new customers are going to want to make comparisons with their usual sources of purchase before being convinced of the price appeal of the new stores. Except for outstanding lines on which no retail outlet offers a price as low as the mail-order companies do, one may question whether the price differential between the outlying stores of the mail-order company and centrally located shopping institutions will be large enough to overcome the consumers' desire to make comparisons.

Consumers are more likely also to discover the real significance of the price differential through making comparisons. If it be granted that price differentials exist in favor of the store of the mail-order company at the outset, there is the question of how long these differen-

tials can be maintained. Well managed department stores in large cities are able to buy almost as advantageously as the mail-order companies.

Lower prices might be possible in the Sears, Roebuck and Company stores than in stores in the shopping district because of lower operating expenses in outlying stores. While concrete evidence is not available for the mail-order company's stores, it is probable that the operating economies in the outlying store are overestimated; rent expense is lower, of course, but the volume of sales to carry that expense is likewise lower, so that the expense ratio as a percentage of net sales may not be different between the downtown and outlying institutions. The other fixed items of the Sears, Roebuck and Company department store likewise will be spread over a smaller volume. The net result is that the Class A stores of Sears, Roebuck and Company have no outstanding advantages over their downtown competitors with respect to location and, in addition, the Class A stores for the present at least have some very serious handicaps to overcome.

If, as is sometimes stated, Sears, Roebuck and Company really intended that its stores should be neighborhood stores rather than stores with a city-wide appeal, then the size of the stores and the number of lines carried should be reduced. The volume of business which the new stores may secure is an important consideration.

That the mail-order companies built new stores, instead of purchasing going units, is significant. This fact is more significant for the Class A stores of Sears, Roebuck and Company than for the other types of stores of either company. Department stores generally have a large overhead which requires a large volume of sales before net profits result. A new store at first must secure its volume at the expense of competing stores of the community or by drawing in new customers from a widened trading area. (Some stores of both companies are reputed to have widened the retail trading areas of communities. It is improbable, however, that a Sears, Roebuck and Company store in a city of 75,000 or over would enlarge the trading area of that center materially.) In time the new store may expect volume with the growth of the purchasing power of the city. There is, then, a distinct possibility that some of the larger Class A stores will require for profits a larger sales volume than they will secure for several years. These department stores in large cities have to meet the severest type of competition, that of the medium-price to low-price department stores, bargain basements dealing in job lots, and variety chains. This fact also makes it difficult to build volume at once.

A further difficulty arising from the fact that the stores are new stores is that the company lacks a trained personnel, well steeped in the policies of the company. High-grade managers for large depart-

ment stores are not plentiful; moreover, it takes a good manager some time to whip a green organization into shape. Under mail-order methods, the finished catalog, the work of experts, was the chief contact of the company with the customer; in the department store, the humblest clerk may be the chief contact and may build or destroy goodwill and sales volume. The mere size of the store also introduces another problem of control, that of records. The larger a store becomes, the greater is the need for reports and adequate control records; these records add to expense and also add a personnel which has to be trained to the policy of the company.

Sears, Roebuck and Company has started in a new field; it is one of the pioneers in the organization of a department store chain. New problems have to be solved, and mistakes will be made; total sales for the company will increase as a whole, but it may be doubted that net profits will keep pace for some time to come. The company selected the right market; it may be questioned, however, whether it did not begin Class A department store expansion too quickly. There are not adequate data in the case of Sears, Roebuck and Company for a detailed discussion of the Class B stores; it is probable that they will be more immediately profitable to the company than the Class A stores.

Montgomery Ward and Company might better have developed its stores outside mail-order territory or in territories in which the mail-order business was definitely on the decline. News dispatches indicate that the company is modifying its policy in this respect.

A few other facts upon which extended comment will not be made deserve mention. These points apply to both companies. Both companies have established buying organizations for mail-order purposes, which also buy for the retail stores. The management problems of retail stores are sufficiently different from those of mail-order houses to make a separate organization, operating as well as buying, seem desirable for the retail stores. The customer appeals of the two types of distribution differ, and the amount of stock to be carried, the control of that stock, the number of price lines to be offered, the styles to be handled, all are specialized problems of the retail stores. Provision should be made for their proper care and administration by the creation of separate retail store organizations.

March, 1929

E. P. L.

DORHART COMPANY¹

MANUFACTURER—PIE FILLING

PLANT LOCATION—*Based on Comparative Production Costs.* A company manufacturing bakers', confectioners', and soda fountain supplies, which it sold throughout the eastern part of the United States, owned a plant in Canada where blueberry pie filling was made. In 1923, as a result of duties imposed on the product of the Canadian factory imported into the United States, the company's profit on the product of its Canadian plant was practically eliminated. The company debated in 1924 whether to give up its plant in Canada and establish one in Maine, where the estimated cost of production was 1 cent less per pound of finished product. Because a large blueberry crop and hence lower production costs were expected in 1925, the company decided to operate its Canadian plant for another year, at least, and in the meantime to test the competitive and market conditions in Maine by leasing a blueberry canning factory there for one year.

(1924)

The Dorhart Company, which manufactured bakers', confectioners', and soda fountain supplies, sold its products throughout the eastern part of the United States. In Canada the company owned a plant in which only blueberry pie filling was made. The products of this plant were sold under a single advertised brand directly to retailers in the United States. In 1922 a duty was imposed upon the products of the Canadian factory which were imported into the United States. This duty was raised during the following year, so that, in 1923, the cost of the product delivered to the company's office in the United States was increased by 3 cents per pound. Because of competition, the company had not increased the selling price of blueberry pie filling during that time. As a result, profits on that product were practically eliminated. In view of this situation, the company's advisory committee, composed of the president, the vice-president, the sales manager, the head of the manufacturing department, the treasurer, and the auditor, in 1924 had to decide whether the company should cease manufacturing blueberry pie filling in

¹ Fictitious name.

Canada and establish a plant for the manufacture of this product in Washington County, Maine, which was the center of a blueberry growing and canning district.

In addition to its Canadian plant, the Dorhart Company had three other plants: one in Boston, where jams, preserves, pie filling, and extracts were made; a factory in a northern Massachusetts city, where ovens and utensils were manufactured; and a summer factory in Maine, where wild raspberry jam and preserves were made.

The products distributed by the company were divided into three large groups: the A group consisted of food products which were prepared in the company's own plants; the B group included articles ordinarily carried by wholesale grocers and sold at wholesale by the Dorhart Company; and the C group was made up of bakers', confectioners', hotel, and restaurant equipment. All the products in group C, with the exception of ovens and utensils made in the northern Massachusetts city, which comprised about one-fourth of the total sales in the group, were sold at wholesale by the company.

Although group B was considered a wholesale line by the company, about 50% of these products were made, under production contracts stating a fixed price, in independent plants which received practically all their working capital from the Dorhart Company. Losses under these contracts would be borne by the outside manufacturers, since the contract price was not fixed until the fall, a short time before the Dorhart Company delivered to retailers the future orders it had taken, subject to buyer's approval of price, in the spring. Since by fall the demand and supply of blueberries usually was stabilized, the Dorhart Company ran little risk of loss in stating a fixed price in its contracts with outside manufacturers. The manufacturers ran a risk, because other companies, to a large extent, followed the price quoted by the Dorhart Company. Thus far, however, none of the manufacturers had incurred losses under the contracts with the Dorhart Company. In practice, this company shared accidental losses, such as those arising from cans breaking open, equally with the manufacturers.

The three principal groups of products of the Dorhart Company were subdivided, on the basis of the type of article sold, into the following 11 departments:

- A-1 Jams, preserves, and pie fillings
- A-2 Crushed fruits and syrups
- A-3 Extracts
- A-4 Baking powder
- B-5 Staple wholesale groceries
- B-6 Specialties (such as powdered milk, molasses, and malt)
- B-7 Canned goods
- B-8 Bakers' machinery
- B-9 Ovens
- B-10 Bakers' utensils
- B-11 Ice cream and confectioners' supplies

Each of the departments was in charge of an executive who was responsible for the purchasing, selling, manufacturing, and administrative activities within his department.

The net sales of the Dorhart Company were about \$3,000,000 a year. Sales were distributed over the three main groups of products approximately as follows:

A group.....	40%
B group.....	45%
C group.....	15%

The trend of sales was upward, and it was believed that within a few years they would reach \$4,000,000 a year.

A force of 32 salesmen sold the company's products directly to bakers, confectioners, hotels, restaurants, and institutions. The sales within each main group of products were divided among the various classes of customers as shown in Exhibit 1.

EXHIBIT 1
DISTRIBUTION OF GROUP SALES OF DORHART COMPANY AMONG VARIOUS CLASSES OF CUSTOMERS

	Bakers	Confectioners	Hotels, Restaurants, and Institutions
A group	70%	20%	10%
B group	65	20	15
C group	70	15	15

Annual sales of pie filling from the Canadian plant totaled approximately \$63,400, representing about 2,500 kegs of 140 pounds each at an average price of 18 cents a pound. These sales thus were approximately 2% of total yearly sales, and 5%

of the sales in group A. The sales of this product were distributed among the various classes of customers in the same manner as the rest of the products in group A.

Some members of the Dorhart Company's advisory committee proposed closing the Canadian plant and building a factory either at Calais or at Machias in Washington County, Maine. The production facilities of the new plant were to equal those of the Canadian plant. The factory was to be of modern construction located on a railroad siding. Suitable sites were available in both Calais and Machias.

The executives of the Dorhart Company estimated that the total cost of making blueberry pie filling would be less in Washington County, Maine, than in Canada, if the product were sold in the United States, because of the import duty. As the company paid 9 cents a quart for fresh berries in Canada and used about two-thirds of a quart of berries in one pound of pie filling, in Canada the raw material cost per pound of finished product was 6 cents; the manufacturing cost per pound of blueberry pie filling made in Canada also was 6 cents. A duty of 3 cents a pound made a total cost of 15 cents a pound for the Canadian product. In Washington County, Maine, berries would cost about 16% more than in Canada, because competition in bids for the berry crop in this locality was keen. Manufacturing cost also would be about 16% greater than in Canada, because of the higher labor cost. With blueberries at 10½ cents a quart, the raw material cost of blueberries in Maine would be 7 cents per pound of pie filling as compared with 6 cents in Canada; manufacturing cost likewise would be 7 cents as compared with 6 cents in Canada; and the total cost of the filling thus would be 14 cents per pound, as compared with 15 cents in Canada. The comparative costs per pound of pie filling, in Canada and in the United States, are summarized in Exhibit 2.

The selling price of the blueberry pie filling varied from 18 cents to 20 cents per pound. The comparative gross margin thus would be: in Canada, 3 to 5 cents per pound, or 16⅔% to 25% of selling price; in Maine, 4 to 6 cents per pound, or 22⅔% to 30% of selling price.

In Canada the manufacturing overhead was high, varying from 20% to 25% of sales, because the plant was operated only during the blueberry season, which lasted three months. Profits in

EXHIBIT 2

COMPARATIVE COSTS, PER POUND OF FINISHED PRODUCT, OF MANUFACTURING BLUEBERRY PIE FILLING IN CANADA AND IN THE UNITED STATES

	Canada	Washington County, Maine
	(Cents)	(Cents)
Berries.....	6	7
Manufacturing Cost.....	6	7
Duty.....	3	—
Total.....	15	14

Canada thus were small, and in some years a loss had been incurred. In Maine, on the other hand, the executives of the Dorhart Company estimated that a plant with overhead of from 20% to 25% of net sales would make a net profit of from 2½% to 6% of net sales. As the establishment of a plant in Maine was expected to involve a capital investment of about \$15,000, the plant thus would yield a net profit of from 10% to 26% of the capital investment. The net profit in Maine had to be large in order to offset the possible losses which might be sustained in years when blueberries were high priced. The selling price of the pie filling did not vary with the cost of the blueberries, because of keen competition in the company's entire line of wholesale grocery items.

Nearly all the estimated capital investment of \$15,000 would be needed for equipment used in making pie filling. A boiler for cooking blueberries would cost about \$1,500. The canning equipment could be secured from the American Can Company, which would charge, for the use of its machinery, a royalty in the form of sales of cans to be used with the equipment. The cost of making the pie filling thus would vary with production, and fixed capital investment would be relatively small. Blueberry pie filling was made by heating blueberries to drive out the moisture and by adding sugar, along with other ingredients, to the berries, so that the compound was ready to be placed between pie crusts without further preparation by the consumer. About 90% of the blueberry pie filling was put up in kegs for sale mostly to bakers; 5% was packed in 30-pound tins; and the remain-

ing 5% was packed in barrels. The keggings and heating equipment could not be leased and, therefore, would be a fixed investment.

If the Dorhart Company ceased to manufacture blueberry pie filling in Canada, it would not sustain a heavy loss of capital. The company's investment in the Canadian plant had been written down on its books from \$8,000 to \$3,000. The heating and keggings equipment of the Canadian plant could be transferred to Maine at little expense. The only loss sustained would be on the building, which represented an investment of about \$1,000 and for which there was no market.

The management of the company believed it was impracticable to attempt to develop a Canadian market for the pie filling and thus to avoid paying duty on its product. The population of Canada was only about 9,000,000, which was less than the population of New York State. The fact that the population was scattered would necessitate a high sales expense, and an advertising campaign would have to be instituted in order to make consumers familiar with the company's product. The company, therefore, was of the opinion that it would be less expensive to continue selling in the United States, where a market already existed, than to attempt to develop a Canadian market for pie filling.

If a plant was established in Maine, the superintendent of the Canadian factory and the field men sent out to buy berries from growers in Canada would be dismissed, and new men would be sent from the Boston office to perform these functions in Maine. The superintendent of the Canadian plant owned a large acreage of blueberries and made pie filling under contract with the Dorhart Company. The company paid him for his berries and, in addition, paid him a fixed price per pound of pie filling; out of this amount he paid the workers under him. It was possible that he would be dissatisfied if the company closed its Canadian plant, and that he would enter into a contract with a competitor of the Dorhart Company to make blueberry pie filling under the company's formula, which was not patentable. This action was not probable, however, since there was little possibility of the rate of duty being lowered for a long time, and since Canada was not a desirable market for pie filling. As the Dorhart Company was the foremost distributor of blueberry pie filling in the

United States, it had the advantage of a developed market over any possible competitors.

If a factory was established in Washington County, Maine, on the other hand, competitors probably would be attracted to that region. A plant here would not be isolated as was the one in Canada, since this locality was the center of the blueberry canning district. The company, however, would still retain its market advantage over potential competitors.

The establishment of a manufacturing branch in Maine would involve no new finance, production, or distribution problems. The financial position of the Dorhart Company was such as to enable it to make the required investment without difficulty; the production problems in Maine would be the same as those in Canada; and the distribution of the product was already established.

Calais and Machias both had advantages as locations for the proposed new manufacturing branch. Calais had a sufficient supply of berries and satisfactory water facilities for washing the berries; also it was outside the competitive district farther south. Machias also offered an ample supply of berries and desirable washing facilities, but it was located in the center of the canning district. In order to attract less attention to the blueberry pie filling from competing canners, the executives, therefore, preferred Calais as a location for the proposed branch.

The company had an opportunity to test the Maine location for a year through the lease of a small canning plant at Machias, at a cost of \$1,000 for the year. No fixed investment in equipment would be required under this plan, since the canning machinery could be leased from the American Can Company, and the plant already was equipped with cooking facilities. Costs would thus vary with production.

The condition of the blueberry market in 1924 indicated that the time was not suitable for establishing a permanent branch in Maine. The price of blueberries at that time was low, and the duty on blueberry pie filling coming into the United States was correspondingly low, since the amount of duty paid varied according to the total manufactured cost of the finished product. The management estimated, therefore, that the plant in Canada probably would be able at least to meet expenses in 1924. If the company operated a plant both in Machias and in Canada for one year, it would have the benefit of a year's experience at

Machias on which to base its later action, without taking a loss on the Canadian property.

Indications were, moreover, that the blueberry crop would be even better in 1925 than in 1924. Each year the growers burned over about one-third of their acreage, and the amount of the following year's crop depended largely upon the success of the burn. As the burn in 1924 had been satisfactory, a large crop of blueberries at correspondingly low prices was expected in 1925. The company believed that in 1925 it could start production in a new plant at a lower cost than it could in 1924.

The company decided, therefore, to take no immediate action in regard to stopping the manufacture of blueberry pie filling in its Canadian factory and establishing a plant in Washington County, although it was of the opinion that a manufacturing branch eventually should be established in Maine. Even though the total cost of making blueberry pie filling would be less in Maine than in Canada, the company determined to wait a year before deciding definitely whether to establish its new plant there, in order to test competitive and market conditions in Maine by leasing the canning factory at Machias for one year. The company would use this factory to can blueberries, and if, at the end of a year, the experiment in canning had proved a success, the company would manufacture canned blueberries as well as blueberry pie filling in a plant to be located in Calais, Maine.

COMMENTARY: Two problems of policy are presented in the case of the Dorhart Company: the confinement of operations to the United States in order to avoid the tariff charge, and the maintenance of a full line by continuing to manufacture the blueberry pie filling. The problem as to the location of the manufacturing branch resolves itself into a matter of relative costs of production in Canada and in Maine.

The figures presented for costs, 14 cents a pound for production in Maine and 15 cents for production in Canada, do not reveal the trend of costs. In a particular year, production figures might argue for a change in the location of the factory, but to do so without considering the permanency of the conditions causing the change would be unwise, especially as the plant cost was considerable. If additional information on costs during the immediately preceding years, and careful estimates of costs for the subsequent year, were presented, a basis for making a decision would be afforded. The principal items of cost, berries, manufacturing costs, and customs duty, should have been studied independently, as their trends would be influenced by different

factors. If this study bore out the situation indicated by the cost figures presented in the case, to a sufficient extent to justify the capital loss of \$1,000 and the capital investment of \$15,000 involved, the plant should have been located in Maine.

Distribution factors would not bear directly upon the decision, except as the necessity for supplying a full line might require the continuation of the blueberry pie filling line. A full line, or a line supplying the demands of customers, is good insurance against inroads by competitors. The discontinuance of the line in this case seems to have been inadvisable as a solution to the problem.

October, 1927

H. N. G.

SUNMAN COMPANY¹

WHOLESALE—DRUGS

WAREHOUSING—*Selection of Site for New Warehouse.* A wholesale drug company with annual sales of \$600,000, located in a city with a population of 75,000, was to build a new warehouse. Since most of its purchases were in less-than-carload lots, the firm would gain no advantage from location on a railroad siding. Moreover, since a majority of the company's retail customers called daily at the warehouse to make small purchases, it was necessary to have the new warehouse easily accessible to customers. An available site was selected, therefore, near the center of the city.

WAREHOUSING—*Building Plans for New Warehouse.* A wholesale drug company, in planning the type of construction for a new warehouse, decided that it should be so designed that: the loading and unloading of merchandise could be carried on without congestion; storage space would be provided for delivery equipment; the stocks of merchandise would be readily accessible; communication between departments on different floors would be easy; and provision would be made for future expansion.

MERCHANDISE LAYOUT—*Arrangement of Stocks in New Warehouse.* A wholesale drug company, in planning the type of construction for a new warehouse, decided that the layout of merchandise should be such as to permit rapid filling of orders, ready accessibility of reserve stocks, reduction in the number of employees, minimum wastage of time, and elimination of incoming and outgoing traffic congestion.

(1925)

The Sunman Company, a wholesale drug company, followed a policy of expanding its operations slowly and conservatively. During the 12 years preceding 1925, annual sales increased from \$200,000 to \$600,000. In January, 1925, the construction of a new warehouse with improved service facilities was deemed to be necessary. The company officials, consequently, had to decide upon the selection of a site for the warehouse, the type of building to be erected, and the general factors governing the arrangement of equipment and the layout of merchandise.

The Sunman Company, located in a city with a population of about 75,000, sold a general line of powdered drugs, proprietaries,

¹ Fictitious name.

pharmaceuticals, and sundries. Because retailers hesitated to accept wholesalers' private brands, the company had not attempted to place a private brand upon any merchandise. Distilled water was the chief product of the laboratory. The company sold drug-store fixtures and soda fountains, but generally did not carry these articles in stock.

The policy of the company had been not to expand more rapidly than reinvested earnings would permit. It had borrowed from banks only at infrequent intervals. No money had been borrowed during the year 1924. In January, 1925, the company had a surplus and undivided profits of over \$100,000. For several years, the officials of the company had contemplated the construction of a new warehouse, and had accumulated, for that purpose, bonds, certificates of indebtedness, and other securities to the amount of about \$70,000.

The warehouse then occupied by the company was within one block of the center of the city. It was a 3-story building of mill construction, containing about 23,000 square feet of floor space. This space included a balcony of about 2,000 square feet, on the first floor. The officials of the company had been satisfied with the results obtained from placing merchandise upon the balcony. An elevator, at the rear of the building, and a dumb waiter were the only accessory equipment installed in the building. The owner of the warehouse refused to keep it in good repair. The rent paid by the company, however, equaled only .63% of net sales, as compared with .75%, the common expenditure for the trade.²

The warehouse was next to a public garage. The location of the building, together with its general condition, made the company's insurance rate slightly above \$1 a hundred. The total insurance paid by the company in 1924 was .26% of net sales; this figure was 30% above the common figure of .2% for insurance expense in the wholesale drug trade.³

On the third floor of the warehouse was stored such merchandise as herbs and powdered drugs. The laboratory also was located upon that floor. The second floor was given over almost entirely to the storage of sundries. The first floor, on which was the broken-package merchandise, with the exception of sundries, contained practically all the proprietary medicines and pharma-

² Bureau of Business Research, Harvard University, Bulletin No. 50, *Operating Expenses in the Wholesale Drug Business in 1924*, Table 31, opposite page 64.

³ *Ibid.*

ceuticals which the company carried in stock. The assembling, checking, packing, and shipping of merchandise were done upon the first floor. The offices, also, were located there, although no space was available for executives' private offices.

Ordinarily two men were employed upon the third floor, three men on the second floor, and nine men on the first floor. The duties of the nine men on the first floor were not defined specifically, since each man assisted wherever additional help was necessary; ordinarily, however, there were one packer, one shipper, two checkers, and five stock clerks. One checker and one stock clerk spent their entire time in filling country orders and in supervising incoming freight. In addition to supervising the shipping, the shipper assembled for orders the merchandise, consisting chiefly of oils, mineral water, and fruit syrups, stored in the basement.

Country orders, representing about 50% of the total sales volume, were assembled and checked upon a table on the first floor, near the rear of the building. Orders for city customers were assembled and checked upon a table in the center of the room, near the front of the building. If an order, either for a country or a city customer, required articles stored on the second or third floor, or in the basement, those items were copied on separate sheets by a clerk before the order was sent to the operating or broken package department; these sheets then were taken to the respective floors, and the merchandise required was sent to the first floor, either by elevator or by dumb waiter.

One stock clerk usually procured all the items for one order, except articles stored in the basement, or upon the second or third floor. A stock clerk, therefore, had to climb the stairs to the balcony each time an order specified merchandise located there. Although this practice interrupted the horizontal movement of orders in process of being filled, the officials of the company did not believe that the stock clerks considered it a hardship, since they never had complained. No estimate had been made of the waste motion involved in this practice.

Ordinarily, reserve stocks of merchandise were kept in the same location as the forward stock from which orders were filled. Items of merchandise which were purchased in lots of several dozen cases were arranged in piles on the first floor. The cases then were opened one at a time by the stock clerks as the mer-

chandise was needed. This method eliminated the expense of transporting merchandise to a surplus stock department and of retransporting it to the operating department. More floor space was required in the operating department, however, than would have been necessary had the surplus stocks been carried in a different location.

There were 56 retail druggists in the city. It frequently happened that in one day as many as 40 of these sent to the warehouse for a small item of merchandise which they did not have in stock when ordered by a customer. The retailer's customer usually was kept waiting until the merchandise could be procured. The officials of the Sunman Company had attempted to induce the retail druggists to purchase in small frequent orders. This practice not only minimized the risk of overstocking a particular item, but also enabled a retailer to obtain a higher rate of stock-turn. Because of the multiplicity of items in the drug business, an attempt by a retailer to carry all items would mean large stocks and low stock-turn.

The limited floor space in the warehouse prevented a satisfactory layout of merchandise. Ordinarily, it was necessary to place goods wherever a vacant space could be found, regardless of the location. As a result, merchandise frequently was misplaced and was reported "out of stock." When the Sunman Company did not have in stock the articles ordered by customers, it was customary to obtain the merchandise from competitors. To a great extent, this reciprocity with competitors made it possible to avoid back-ordering merchandise. The reciprocity agreements, however, provided that a wholesale drug company should purchase such fill-in merchandise from another company at the wholesale list price. Thus no profit was obtained from this type of sale.

The warehouse had poor facilities for shipping merchandise. All orders for city customers had to be taken out through the front door. Thus there was not only congestion in the entryway, but there was little available street space in which customers might leave their trucks or automobiles before the warehouse. Country orders were shipped through a rear entrance opening upon a public alley. The use of this alley by other mercantile establishments located in the vicinity frequently led to congestion of out-going deliveries. Shipments of incoming merchan-

dise, which also were brought in through this alley, often were delayed.

The first step in the plans for the new warehouse was to select a suitable site. The location must be satisfactory with respect to railways, foundations, the cost and dimensions of the site, and the operating economies obtainable.

Because of its small volume of sales, the company purchased few items of merchandise in carloads, and hence had to transport practically all its incoming merchandise from the freight depot; a railway siding, therefore, would not be worth consideration. A location on a railroad, furthermore, would be dustier and more insanitary than one located at a distance. The officials decided, therefore, that a suitable site for the warehouse would be near the center of the city. Another reason for a central location was that the company's warehouse should be easily accessible to the retail druggists who came to the warehouse or sent their clerks to obtain small items of merchandise. The officials decided, also, that for the company's purposes, an ideal warehouse should be 2 stories high, 100 feet wide, and 140 feet long. In a warehouse of these dimensions, it would be possible to store all the broken-package merchandise, as well as sundries, upon the first floor, and still provide sufficient room for an increase in the volume of sales.

Although the company found several sites whose dimensions were 140 feet by 100 feet, they either were not for sale or were not located centrally. It was decided, therefore, to purchase a site whose dimensions were 140 feet by 80 feet, located only 2 blocks from the center of the city. On this site the company built a 3-story warehouse of mill construction, which, with the real estate, cost approximately \$125,000. The company estimated that this capital expenditure was financially justifiable, since bank or mortgage loans would approximate at most only about one-fifth of the total cost. Depreciation was to be charged off at the maximum rate permitted by tax officials; this rate would be determined as soon as possible.

The arrangement of equipment to provide effectiveness of operations in the new warehouse was as follows: A one-story, enclosed fireproof driveway, 10 feet wide, was built along one side of the new building. In the floor of the driveway were openings into the basement, which was constructed under both the building and the driveway. One opening entered a fireproof room

sufficiently large to contain a carload of excelsior. Through the second opening, coal could be unloaded into a fireproof room adjacent to the furnace room. The third opening was one through which ashes could be removed. No mechanical aids for this purpose were provided. Opening into the driveway from the first floor was a doorway through which all city orders were to be shipped. Thus, delivery trucks would be under shelter while they were being loaded. Since the driveway could be closed and locked, it also furnished storage space for the delivery equipment. Country orders were to be shipped through a passageway at the rear of the building, opening from the shipping department into an alley. Since no other large mercantile establishment used this alley for the shipment of merchandise, congestion would not occur.

The dimensions of each floor of the new building were 70 feet by 140 feet. The ground floor contained a large room for warehouse purposes, a clerical office, and the executive office. The other floors were used almost entirely for warehousing. In the warehouse space on the first floor, balconies were constructed at both sides and at both ends; they were connected by a balcony suspended from the ceiling and extending lengthwise of the room, and by a runway extending crosswise. On the floor and the balconies were constructed shelves and bins, between longitudinal and transverse aisles, for the storage of merchandise. The front and rear balconies were approximately 15 feet wide, while those on either side and in the center were about 10 feet wide. The balconies were reached by two stairways from the first floor.

In addition to an elevator from the basement to the third floor, there were two fireproof stairways, one at the rear and one at the front of the building. A spiral chute also extended from the third floor to the first floor, terminating between the tables upon which country and city orders were to be assembled. Three dumb waiters extending from the third floor to the first floor also terminated between these tables. The number and final location of shipping racks would be determined when the building was occupied.

In order to provide for future growth in sales volume, the building was so constructed that the balconies could be made into another floor if necessary. The construction of the building also provided for the addition of a fourth floor, if that should

become necessary. The latter addition could be made without removing the roof.

The basement, in addition to the fireproof rooms already described, contained two other similar rooms. A chute leading from the alley to the basement permitted merchandise packed in barrels and boxes to be stored in the basement without the use of the elevator.

As far as possible, both broken- and full-package supplies were to be stored together, for convenience in filling orders and to prevent needless rehandling. As formerly, the more rapidly moving articles would be left in the original cartons.

The company intended to place all its broken-package merchandise, with the exception of sundries, upon the first floor and upon the balconies. This layout permitted the orders to be shipped with the least possible delay, thus insuring prompt delivery to customers. The exact location of each item of merchandise had not been determined finally. The items having the largest volume of sales were to be placed nearest the assembling tables. Those items for which there were only infrequent calls were to be placed upon the balconies. As the building's floor area was smaller than that originally desired by the officials of the company, it was necessary to place the sundry merchandise and the sundry display room upon the second floor. The third floor was to contain the powdered drugs which it was necessary to keep dry, and the laboratory. In the basement were to be stored the fruit syrups, mineral waters, and oils which had to be kept in a cool place; empty bottles also were to be stored in the basement.

On the first floor, city orders were to be assembled and checked on a table placed in the center of the room, opposite the passageway leading to the driveway. Country orders were to be assembled and checked on a table at the rear of the building, adjacent to the shipping department. The purpose of this arrangement was to facilitate the prompt shipment of all orders. For incoming freight, there was an entrance in the rear of the building directly in front of the elevator. Space at the front of the first floor was to be used for offices, both executive and clerical. When retail druggists came to the warehouse for merchandise, they would pass through the offices, so that the executives would have an opportunity to greet personally each retail druggist who visited the warehouse.

The officials of the Sunman Company expected that the use of the new building would reduce operating expenses. It would effect a monthly saving of \$100 in insurance, and would eliminate garage rent of \$400 a year. The officials believed that the insurance, taxes, and depreciation to be incurred each year, together with the interest on the investment, would not exceed .75% of net sales, the common expense for rent in the wholesale drug trade in 1924.⁴

The increased floor space on the first floor would make possible a more standardized arrangement of the merchandise which, with the installation of the spiral chute and the dumb waiters, would permit orders to be filled and dispatched more promptly than previously. For this reason, one of the nine men formerly employed on the first floor could be discharged. Moreover, the better service which the company could offer its customers was expected to result in an increased volume of sales. As a result of the increased volume and the decreased operating expenses, the officials expected the total operating expenses of the company to be reduced from 16.80% to 15.80% of net sales, a reduction of 1%.

COMMENTARY: The belief of the officials that the annual insurance, taxes, repairs, depreciation, and interest charges would not exceed .75% of the net sales would appear to be in error. A conservative estimate of such expenses for a property costing \$125,000 would be \$10,000, which amounts to 1.7% of the company's annual net sales and exceeds the normal rental charge of .75% by \$5,000 a year. Inasmuch as the officials planned to borrow only one-fifth of the sum needed, it seems probable that their expense figures did not include a proper interest charge against their surplus funds thus invested. The reductions in operating expenses or increases in business would not appear to be sufficient to neutralize this abnormally high rent ratio.

It is apparent that the dominating factor determining the location of the new warehouse was its immediate adjacency to the center of the city, where the warehouse would be easily accessible to retail druggists. There are several factors which might tend to mitigate the importance of this centralized location. Increasing traffic congestion, for example, would be a growing disadvantage to such a site. With the present use of the motor car and truck, it is frequently found that locations on strategic highways outside the business district are better

⁴ Bureau of Business Research, Harvard University, Bulletin No. 50, *Operating Expenses in the Wholesale Drug Business in 1924*, Table 31, opposite page 64.

sited from the standpoint of convenience and accessibility. Again, the trend of the city's growth with regard to the location of outlying drug stores and shipping points to country trade might establish a center of gravity at some point other than the center of the city. Zoning regulations allowing, an outlying location would probably have further advantages in lower insurance rates, possibilities of erecting a cheaper type of building, and opportunity for additional parking space for customers' cars.

The initial consideration of the virtues of such outlying areas would also have widened the field of opportunities for the renting of more commodious quarters. In view of the recent increases in the costs of building, there is some probability that an increase in floor area might have been obtained at a lower rental cost by this means.

The case does not give sufficient data to determine the degree of need for larger quarters. The statement is made that the limited floor space required goods to be placed wherever room could be found, regardless of location, and that this situation resulted in merchandise being frequently misplaced and reported out of stock. While congestion introduces difficulties in stock control, it should not render such control ineffective, although the situation may justify increased operating expense. It is not infrequently found that the disadvantages of congestion are more than outweighed by the disproportionate increases in expense which would be caused by additional floor space.

It was noted also that the owner of the old warehouse refused to keep it in repair. It is possible that the Sunman Company could have made these repairs at its own expense and still have maintained its total rent figure at a suitable ratio.

Justification for the shouldering of the abnormal rental expense would follow from further evidence that:

1. The center of gravity of trade was found to be in the center of the city.
2. No suitable buildings were available in the outskirts of the business section.
3. The central location was such that it would not be adversely affected by future changes in the location of the trading center and by future traffic congestion.
4. The initial cost and maintenance expense of a new building in the outlying district would not be less than one centrally located.
5. The three-story building was as well adapted to economical operation as the two-story building originally considered to be ideal.
6. An analysis of possibilities of conserving present storage space proved that there was no opportunity to make use of existing facilities to better advantage.

RELSON COMPANY¹

WHOLESALE—DRUGS

WAREHOUSING—*Revision of Packing System to Increase Storage Space.* The sales of a wholesale drug company had increased so that the warehouse space reserved for open-package merchandise, from which orders were filled, became inadequate. After merchandise had been checked with the order to which it applied, it was placed on a truck in the aisle behind the checkers and taken by packers to the packing department in the rear corner of the room. By installing a conveyor system to carry merchandise from the checkers to the packers, the company eliminated the necessity of using one aisle for the packers' trucks and thus provided additional space for the storage of open-package merchandise.

ORDER FILLING—*Revision of Packing System to Eliminate One Handling of Merchandise.* The sales of a wholesale drug company had increased so that the warehouse space reserved for open-package merchandise, from which orders were filled, became inadequate. In order to provide additional storage space and to eliminate one handling of merchandise in filling customers' orders, the company decided to replace a shipping rack, on which merchandise was placed after being packed, before it was sent to the shipping department, by eight trucks, each large enough to hold the orders of about 12 customers, and each of which was to be taken, when loaded, directly to the shipping platform.

(1924)

Sales of the Relson Company, a drug wholesaler, were \$1,100,000 in 1922 and \$1,300,000 in 1923. In 1924 the company's sales to its 250 customers were being maintained at a rate approximating \$1,500,000 annually, which meant a 15% increase over 1923 sales. Since this increase required additional storage space and additional handling of merchandise, the officials of the company studied the operations of the warehouse in order to find means of conserving space and of increasing the efficiency of operations.

The Relson Company rented a five-story brick building in which both the warehouse and the offices were located. On the fifth floor was stored the merchandise in full packages, which constituted the surplus stock. On the fourth floor were placed the bulk

¹ Fictitious name.

drugs and sundries. The third floor contained, with the exception of sundries, all the open-package merchandise, which constituted about 90% of sales. Checking and packing also were done on this floor. The larger part of the second floor was subleased, and the remaining space was used for the storage of bulk merchandise. The first floor contained the offices, the display room, the shipping department, and that merchandise, such as bottles and other glassware, which it was desirable to handle as infrequently as possible.

After an order had been received from a customer and checked by an order clerk, it was sent by a dummy elevator to a desk at the front of the third floor. If any bulk drugs or sundries were included in the order, a notation of the amount ordered was sent to the fourth floor. A copy of the order also was sent to the clerk in charge of the full-package merchandise if any such merchandise was required by the order. All the bulk drugs and sundries included in an order were sent to the third floor, where they were assembled and checked, together with the items of merchandise from that floor. Full-package merchandise was sent directly to the shipping department.

The open-package department employed 16 stock clerks, 3 checkers, and 3 packers. A wide main aisle ran from the front to the back of the floor. At right angles to the main aisle were passageways with merchandise stored in shelves or bins on either side. The location of each type of merchandise was determined chiefly by experience and convenience; no analysis had been made to find the most effective relative positions of lines or items. The layout of the third floor was as shown in Exhibit 1.

At one side of the room, beyond the passageways and parallel with the main aisle, was a long checking table, the top of which was divided into bins. After a stock clerk had procured an order from the desk in the front of the room, he went through the passageways and secured the items of merchandise required. This merchandise then was placed in one of the bins on the table; each bin contained the merchandise for only one order. Between the table and the wall was an aisle in which the checkers worked. They checked the accuracy of the items of merchandise which had been assembled for each order by taking each item from the bin and comparing it with the order before placing it in a box on one of several trucks which stood in the aisle. When

any truck had been loaded fully with boxes of merchandise, a packer took it to the packing department in a rear corner of the room, where he packed the merchandise for shipment.

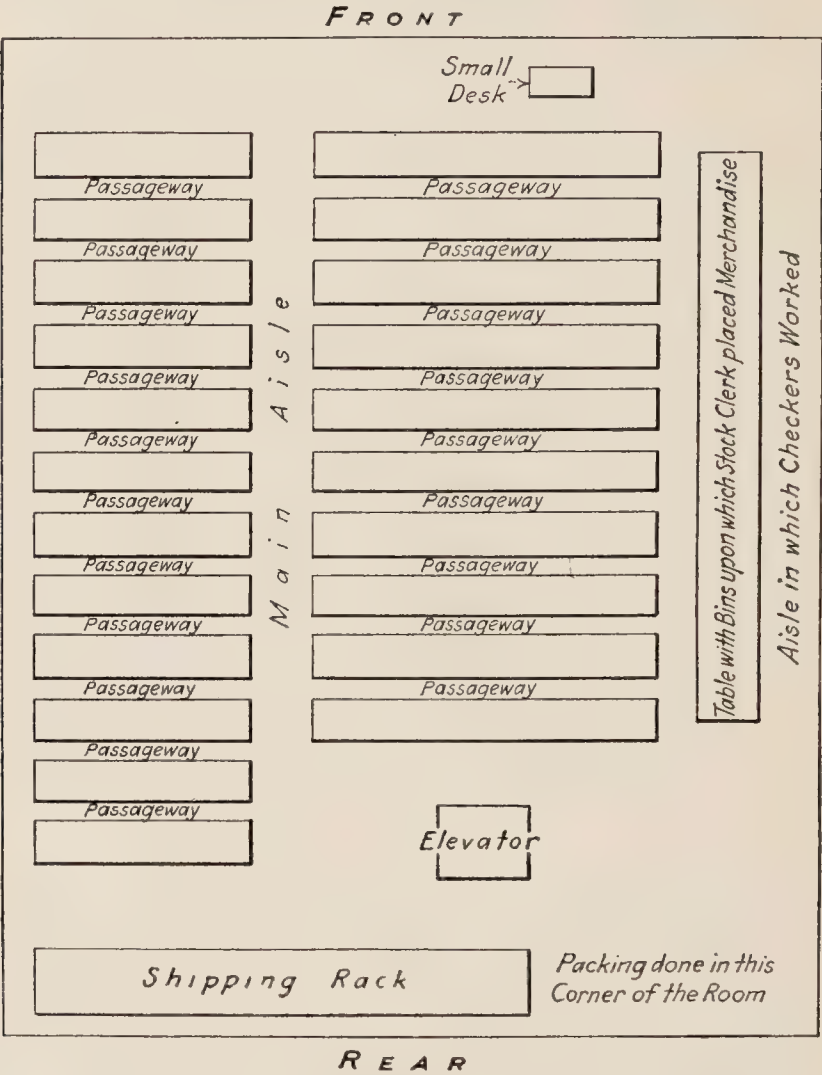


Exhibit 1: Floor plan of open-package department, on third floor of Relson Company's warehouse

As the stocks of merchandise in the open-package department became depleted, the clerk in charge of reserve stocks was notified. Merchandise to replace the depleted stock then was sent from the fifth floor to the third floor by means of a spiral chute. As much as possible of this work was done each morning prior to the time that the work of filling customers' orders was begun.

The stocks of many items of merchandise, however, became depleted during the day, making it necessary to send reserve merchandise down immediately. The entire time of one man and half the time of another was required to send merchandise from the reserve stock room to the open-package department. If a stock clerk, in filling an order, required an item of which the open stock had become depleted, a company rule stipulated that he should not work upon any other order until that item of merchandise had been received from the surplus stock room and placed in the proper bin on the table. The purpose of this rule was to keep the number of errors at a minimum. It had been the company's experience that if a stock clerk was permitted to fill other orders while waiting for merchandise from the surplus stock room, he was likely to forget to obtain the merchandise when it arrived or to place it in the wrong bin.

Late in 1924 the limited open-package storage space was insufficient for the increased sales. The forward stocks were exhausted more frequently than before, and, as a result, the idle time of stock clerks who were waiting for replenishment supplies was a conspicuous waste. If more space could be obtained for open-package stock, such idle time could be reduced through greater continuity of operations.

After the merchandise had been packed and was ready for shipment to customers, it was placed upon a shipping rack, which extended across the back of the room at right angles to the wide center aisle. Each customer was designated by a number, which was written upon the shipping tag attached to each parcel to be shipped to the customer. The customers' numbers also were printed on the shipping rack and arranged according to the delivery routes followed by the company's trucks. For example, all customers upon Route 1 had consecutive numbers, and merchandise for them was placed in a specially designated section of the rack. After an order of merchandise had been packed and the shipping tag prepared, the order was placed upon the shipping rack in the section designated by that customer's number.

Upon examination, the company's system of checking and packing appeared unsatisfactory. In the first place, it required too much space. If the necessity of using the aisle for the packers' trucks could be avoided, that additional space could be used for

storing open-package merchandise. Furthermore, the confusion and congestion caused by the passage of the packers up and down the aisle with truck loads of merchandise delayed the rapid completion of orders. As sales volume increased, this congestion would become worse.

The company decided to avoid the use of the packers' trucks by installing a conveyor to carry merchandise from the checkers to the packers. The conveyor, which was set against the wall, had a width of less than 30 inches. It consisted of a framework which held circular rollers. The end of the conveyor behind the checking section was higher than the end in the packing department; hence, a box of merchandise placed on the rollers moved by gravity to the packing department. This conveyor was installed at a cost of \$350.

The officials of the company were not satisfied with the operation of the shipping rack. Under the method in use, it was necessary for the boxes to be taken off the shipping rack, placed on a truck, taken by the truck to the first floor on the elevator, and unloaded from the truck preparatory to being weighed and loaded on the delivery trucks. It was found, furthermore, that mistakes often were made when the merchandise was taken from the shipping rack and placed upon the trucks. A box which was so situated on the rack as to indicate, for example, that the purchaser was located near the beginning of a route, might be located finally with orders for delivery near the end of the route, so that the driver would overlook the box until he had passed its destination. In such a case, it would be necessary for him to retrace his route. A further disadvantage of the rack was that it occupied space which the company could use advantageously for the storage of merchandise.

The company decided, therefore, to build eight trucks, at a cost of \$44 each, to be used in place of the shipping rack. Each truck had three decks and was large enough to hold the orders of about twelve customers. The system of numbers formerly employed with the shipping rack was used with the trucks. The loaded trucks were taken by elevator directly to the shipping platform. Their use, therefore, eliminated one handling of merchandise, that of taking orders from the rack and placing them on trucks. Furthermore, as customers' numbers could be placed on all four sides of a truck, the trucks required less floor space than formerly

was required by the shipping rack; as a result, more space was provided for the shelving of open-package merchandise.

The results obtained from the first six months' use of the conveyor and trucks were entirely satisfactory to the Relson Company. The space made available by the changes described was sufficient for approximately 1,000 feet of additional shelving for open-package merchandise. As a consequence, the time of only one man was required to supply stock from the surplus stock room, whereas formerly the entire time of this man together with half the time of another man had been required. By eliminating the necessity for packers to transport the merchandise up and down the aisle back of the checkers, and by eliminating the necessity of rehandling the merchandise after it had been placed upon the shipping rack, the company saved the entire time of one man and approximately half the time of another. The officials of the company estimated, therefore, that installations costing \$702 saved the time of two men, or an amount equal to approximately \$2,200 a year. This amount, furthermore, did not represent the entire saving; it was impossible to estimate the additional expenses which would have been incurred by the increased volume of sales if the former method had remained in use.

COMMENTARY: The steps taken by the Relson Company to conserve space and eliminate handling operations were commendable.

In both instances the urge for improvement resulted from operating conditions which were sufficiently serious to attract attention. A more comprehensive survey, involving the complete cycle of transportation and storage from receipt to disbursement, might have brought opportunities for further advance in fields where the need of improvement was not so obvious.

Some concerns, for example, have made use of special motor truck bodies upon which the packing trucks may be placed, thus eliminating an additional handling of material in process of delivery to customers. There is also a possibility that handling costs could have been decreased through the storage of bulk stock with open-package stock. An analysis of past orders to determine the frequency of demand for each product might have resulted in a rearrangement of stock which would shorten the average travel of the stock clerks. Space might be further conserved through a study of suitable bins, shelving, and storing devices to the end that vertical storage to ceiling heights might be undertaken with a minimum of waste space and effort. A study of rates of turnover might also suggest a decrease in the size of orders in

certain products, with consequent lessening in space requirements. The feasibility of such potential economies depends wholly upon the particular conditions met with in a given instance. They are illustrative, however, of avenues of inquiry which would be pertinent in a comprehensive survey of the storage problem.

January, 1927

E. H. S.

ROGERS COMPANY¹

WHOLESALE—HOSIERY AND UNDERWEAR

PURCHASING—*Effect of Falling Market on Advance Orders for Seasonal Goods.*

A wholesale dry goods firm, selling goods under its own brand, specialized in hosiery and underwear of both staple and seasonal types. Ordinarily, the company ordered its seasonal goods from six to nine months in advance of needs, in order to assist manufacturers to level their production peaks; it was convinced that continuous production was of benefit to consumers from the standpoints of excellence and uniformity of output. In the summer of 1923, when prices were falling, the company decided to follow its established policy of placing orders in advance for articles of seasonal demand, at the same time advising manufacturers to be cautious in their purchases of raw materials.

PURCHASING—*Effect of Falling Market on Advance Orders for Staple Goods.*

A wholesale dry goods firm, which sold goods under its own brand, specialized in hosiery and underwear of both staple and seasonal types. The staple goods sold by the company were purchased from manufacturers continuously throughout the year and sold at standard prices. In the summer of 1923, when prices were falling, the company decided to restrict its orders of staple goods, consisting chiefly of silk hosiery, inasmuch as the price of raw silk was proportionately higher than that of other raw materials.

(1923)

The Rogers Company, a wholesale dry goods firm, specialized in hosiery and underwear. Sales in these two lines comprised ordinarily from three-fourths to four-fifths of the company's total sales. All the goods were sold under the company's own brand. The underwear was principally of standard styles, but was of various types and weights to meet requirements of the different seasons. Sixty per cent of the hosiery sold was of standard styles which were manufactured and sold continuously throughout the year. Approximately 25% of the hosiery was of semistaple styles; and the demand for the remaining 15% was seasonal.

Ordinarily, the company ordered its seasonal goods from six to nine months in advance of its needs in order to assist the manu-

¹ Fictitious name.

facturers to level their production peaks. Such articles were held in storage by the manufacturers until the company needed them. Exceptions to this purchasing policy had been made in years when the company expected a drastic reduction in prices such as occurred in 1920.

In the summer of 1923, when prices were somewhat lower than at the first of the year, it was necessary for the company to decide whether to curtail purchases of staple articles until the market became more stabilized, and also whether it was wise on a falling market to place advance orders for seasonal merchandise. Prices in 1923, however, were not inflated to such an extent as in 1920. Although they might continue to decline, the company did not expect the reduction to be serious.

The company purchased the entire output of 8 or 10 manufacturers, and the partial output of about 50 others. Of the purchases from those 50, 75% were made from 8 or 10 medium-sized companies. The manufacturers were all specialists. For example, one produced silk socks exclusively; another, women's silk hosiery; and a third, children's stockings. Others specialized in various kinds of woolen hosiery and underwear. The company believed that by purchasing from manufacturers who specialized on one article, it secured the best service, the lowest prices, and the most uniform quality. Production was more economical in a factory which manufactured one standard article and sold it to one company or to only a few distributors. The overhead of such a company was reduced to a minimum, and the management had an opportunity to progress steadily in the improvement of processes and machinery and in the perfection of its product.

In the company's opinion, the chief advantage of ordering seasonal merchandise in advance was that, in return for the removal by the wholesaler of the problems connected with seasonal production, the manufacturer could give better service to the wholesaler and was more willing to cooperate. Although the savings which resulted from continuous production were not known definitely, they were estimated to be greater than the carrying charges on the finished product. Continuous production eliminated many organization difficulties. A manufacturer who offered steady employment attracted workers of greater skill and ability than could be secured by a factory which laid off many employees each year during the slack period. The result was that the

merchandise produced under such conditions was of a finer and more uniform quality.

The chief disadvantage of ordering in advance of needs was that when prices declined after the orders had been placed, the company sustained a loss. If, for example, the company had had large advance orders outstanding in 1920 prior to the break in prices which occurred in the summer of that year, the effect on its finances would have been disastrous. During the period preceding the break, the officers of the company had realized that prices were excessively high and had decided to place no more orders. This action also had prevented losses on the part of the manufacturers, because, in response to the declining volume of orders, they had curtailed their purchases of raw materials at the prevailing high prices and, consequently, had avoided the accumulation of high-priced inventories. The wholesale company could influence the manufacturers' scale of production more readily in the case of staple goods than in the case of seasonal goods, however. Sales of staple goods were continuous, so that the manufacturers could base their scale of production upon the orders received currently, and, when those orders declined, could curtail production. Seasonal goods, on the other hand, had to be produced in advance of a season's opening, and the manufacturers could not be certain that a decrease in advance orders indicated a decrease in the demand that would be manifested when the season opened.

The Rogers Company believed that its function was to serve as a distributor for manufacturers and not to speculate on market fluctuations. Inasmuch as the articles which the company distributed, both staple and seasonal, were standard and carried a well-known trade-mark, there was no necessity, in the opinion of the company, for the prices of its goods to change in accordance with the continual fluctuations that occurred in the prices of raw materials, except in the case of fundamental price movements such as occurred in 1920. The company was of the opinion that standard prices on staple goods were to the advantage of the manufacturer, distributor, and consumer; for otherwise, manufacturing was irregular; the distributor could not offer the best service because of the uncertainties of the market; and the consumer not only was confused and dissatisfied by the price changes but also received inferior quality and service. The

company, therefore, did not expect to change its selling prices on staple goods during 1923. For the seasonal goods, prices in one season probably would remain fairly constant, but they were likely to change from one season to the next.

The Rogers Company, in the summer of 1923, decided to restrict its orders of staple goods, which consisted chiefly of silk hosiery, inasmuch as the price of raw silk was proportionately higher than that of other raw materials.

For articles with a seasonal demand, however, the company decided to follow its established policy of placing orders in advance. At the same time, it advised the manufacturers to be cautious in their purchases of raw materials, inasmuch as the prices of raw materials might decline. The company followed this policy because of its conviction that continuous production was of benefit to consumers from the standpoint of excellence and uniformity of output. It was also of advantage to the company to cooperate with its manufacturers in their efforts to level their production peaks.

Pursuant to the purchasing policy which it decided to follow during 1923, in the fall of that year the Rogers Company had ordered approximately 75% of its 1924 spring goods. Since silk prices continued high, however, staple silk hosiery was ordered no more than 90 days in advance of the company's requirements.

COMMENTARY: An example is afforded by this case of the problem of governing purchases with reference to future business conditions. The company apprehended that raw material prices and hence finished goods prices were to decline moderately. The validity of that judgment is not open to discussion here; the question presented in the case concerned the buying policy to be followed on the assumption that the judgment was well founded.

The question is subdivided into two parts, one relating to the purchase of staple goods, the other to the purchase of seasonal style goods.

For staple goods, apparently, orders usually were placed by the company only far enough in advance to enable the mills to operate continuously and evenly. The company's decision to postpone its purchases of staple goods therefore was contrary to its averred practice of facilitating production. The company, furthermore, stated that it did not intend to change the selling prices on its staple goods as a result of the anticipated decline in raw material prices; it aimed at maintaining its standard selling prices. Those circumstances did not afford logical ground for the company's decision to restrict its pur-

chases of staple hosiery. If the company had apprehended a falling off in sales, a different set of circumstances would have been presented, but the evidence given makes no reference to that contingency; the factors cited as entering into the company's decision were solely those of production and price. If the statements in the case are correct, the company undertook to secure a speculative gain on its purchases of staple hosiery rather than to carry out an orderly merchandising program.

The reasons ascribed for the placing of the customary advance orders for seasonal style goods were the maintenance of uniformity in the quality of the product and the assistance to the manufacturers in leveling production peaks. For seasonal style goods it was, of course, essential to have the goods available for sale when the season opened, since otherwise the sales opportunities would have been lost. On such style goods, moreover, price doubtless was a less important factor than style in effecting sales.

For seasonal style goods the merchandise had to be produced in advance of the selling season and stocks had to be accumulated temporarily either by the wholesaler or by the manufacturers. The wholesaler had been assuming the risks attendant upon the advance ordering of style merchandise. If the wholesaler had thrown those risks back upon the manufacturers, the manufacturers would have been forced, sooner or later, to adjust their operating plans to enable them to carry those risks with safety, and the wholesaler would have become a less useful agency of distribution. The company's decision to place advance orders for style goods was in accordance with the functions that it had undertaken to render in marketing hosiery.

March, 1927

M. T. C.

EASTERN CENTRAL RAILROAD¹

PURCHASE SOURCES—*Continuing Established Relationship.* Although the prices for lubricating oil quoted by its established supplier were substantially higher than those of a competing and less experienced oil company, a railroad continued to purchase from its customary supplier. Companies which supplied railroads with lubricating oil maintained supervisors on the road to see that the oil was used properly. The railroad did not wish to risk poor supervision, and consequent increased charges for repairs, through a change in its source of supply.

PURCHASE SOURCES—*Choice Influenced by Attitude of Purchaser's Employees.* A railroad was influenced in its decision to continue buying lubricating oil from its established supplier at a higher price than that asked by a competing oil company by the fact that the railroad employees probably would object to a change in oil.

(1923)

In 1923, the cost of lubricating oil for the rolling stock of the Eastern Central¹ Railroad was \$200,000. The Moylan Refining Company supplied the entire quantity on an annual contract in which the price basis was the locomotive and car mileage. In the fall of that year, the purchasing agent of the Eastern Central Railroad was uncertain whether to obtain its 1924 supply of lubricating oil from the same supplier or from a company quoting a lower price.

For 20 years the Moylan Refining Company had supplied the Eastern Central Railroad with lubricating oil. Several other oil companies had offered strong competition to this company during the preceding 10 years, but the purchasing agent of the Eastern Central Railroad had continued to buy from the Moylan Refining Company because its service and product always had been reliable. The entrance of competitors into the market, however, had resulted in a decrease of approximately 40% in the Moylan Refining Company's quotations during that period.

In the fall of 1923, the Eastern Central Railroad requested bids for lubricating oil for 1924 from several manufacturers. The two most favorable quotations were those of the Moylan

¹ Fictitious name.

Refining Company and of the Winthrop Oil Company,² a firm which had been producing lubricating oils for only about 10 years. The Moylan Refining Company quoted a price of \$4.53 per thousand locomotive miles, and the Winthrop Oil Company a price of \$3.32 per thousand locomotive miles. The two companies' quotations per thousand car miles were in about the same ratio. The purchasing agent of the Eastern Central Railroad attempted to discover the cause of this difference in prices in order to decide whether the company offering the lower bid should be given the contract for the 1924 supply of lubricating oil.

The purchasing agent obtained samples of oil from both manufacturers and submitted them to the railroad's chemist for analysis. The chemist's report stated that there was almost no difference in the quality of the two samples. An analysis by chemists not connected with the company showed that the product of the Winthrop Oil Company had a slightly lower resistance to friction and that it increased in temperature slightly more over a test period of five hours. This fact did not mean that the oil would not be so satisfactory as that of the Moylan Refining Company, however, and did not account for the difference in price.

The purchasing agent was unable to obtain definite data from other railroad companies concerning differences in the qualities of the products of the two oil companies. With one exception all reports on the Winthrop Oil Company's product were satisfactory. The purchasing agent believed that the company which had made the unfavorable report had not given the product a fair test because that company's employees had wished to use the specific product to which they had become accustomed.

The service rendered in the lubrication of railroad equipment was extremely important. The oil company having a contract for such lubrication maintained a supervisor on the road to see that proper lubricating methods were followed and that the proper quality of oil was used. The ability of this supervisor not only affected the efficiency of railroad operation but also made possible savings to the railroad company as well as to the manufacturer of lubricating oil. The savings resulting from any decrease in the established number of gallons of oil used were divided equally between the railroad company and the manufacturer.

² Fictitious name.

Although the Winthrop Oil Company had a reputation for reliability, for products of good quality, and for satisfactory service, the purchasing agent was convinced that because of its comparatively short experience in railroad lubrication this company could not give so effective service as could the Moylan Refining Company. If the Winthrop Oil Company's product proved less satisfactory than the oil previously used and the poorer lubrication resulted in a 5% increase in the number of locomotives and cars in the repair shops, the cost of repairs would offset the lower prices of that company.

The Eastern Central Railroad's employees, furthermore, were likely to resent any change in the source of oil purchases because of personal loyalty to the Moylan Refining Company's supervisor and because of a belief that no other oil could be so well adapted to railroad lubrication. If the employees took this attitude, they probably would be careless in the use of a new lubricating oil in an effort to reestablish the products of the Moylan Refining Company as the standard lubricants for the railroad.

The Eastern Central Railroad, therefore, awarded the contract for lubrication of the company's rolling stock to the Moylan Refining Company in spite of its higher quoted prices.

COMMENTARY: This case illustrates a type of problem frequently before the railroad purchasing agent. From his personal viewpoint, price is the controlling factor; from the viewpoint of the operating department, quality, reliability, and service are controlling. A railroad is obligated to furnish adequate service; it is enjoined also to practice "honesty, efficiency, and economy." Granting in this case that there is no question of honesty, the problem is to determine whether the net economy, service considered, would be greater if the cheaper oil were furnished.

The natural inclination of the purchasing agent would be to experiment with the Winthrop oil. If the Eastern Central Railroad's annual locomotive mileage was as much as 20,000,000, not unusual for a large system, the yearly savings in cost of lubrication would be \$24,200. It is apparent, however, that the views of the general manager prevailed. He was responsible for regularity of service and for maintenance costs. In these days of longer locomotive runs, the fact that the Winthrop oil had a slightly lower resistance to friction and that tests indicated a slight increase in temperature of the bearings after five hours' running, were factors which had weight with the officer

responsible for service and maintenance costs. An increase in hot bearings, with consequent interruption to train service, the ever-present possibility of accident, and the likelihood of higher repair costs, were more important potentially than the loss of \$24,200 per year by a refusal to use the cheaper oil.

Too much weight, however, should not have been given to the possible attitude of employees. It is not reasonable to suppose that their friendship for the Moylan Refining Company's supervisor would induce carelessness in the use of Winthrop oil. Cognizant of that possibility, the Winthrop Oil Company would have assigned supervisors of tact and ability who ordinarily would soon have overcome unfavorable prejudice, and the railroad company's supervising officers would have been alert in a campaign of education and watchfulness.

It appears, however, that in balancing the advantages and disadvantages, the factor of reliability and its effect upon train service and maintenance prevailed against the factor of price. It is possible also that competitive traffic considerations also had influence, although no hint is given of that factor. If the Eastern Central Railroad enjoyed a substantial volume of competitive tonnage from the Moylan Refining Company, its continuance might have been jeopardized by a change to the Winthrop oil. The railroad purchasing agent frequently has to resist pressure of that kind.

January, 1929

W. J. C.

CUPRITE COPPER COMPANY¹

PRODUCER—COPPER

PROPERTY VALUATION—*Determination of Price to Offer for Copper Mine.* A copper producing company, which had received from its engineers a favorable report on property containing a large developed deposit of low-grade copper ore, not yet in the producing stage, wished to make an offer for the property. If the company offered materially less than the owners believed to be a fair price, the property would be secured by a competitor. In order to effect a purchase on a sound and equitable basis, the company had to translate the elements of value inherent in the property into a definite valuation and to arrive at a figure which, while assuring profitable operation of the property, would also be within a reasonable trading range of the figure determined by the seller.

(1925)

Mr. Lowden, who held a controlling interest in the National Copper Mine, before organizing this mining company had owned and operated various small western mines with a large degree of skill, but with only moderate financial success. In 1910, incidental to another transaction, he had acquired a substantial acreage of undeveloped land in an unimportant mining district of southern Nevada. Adjacent to or near this property were a number of small mines, struggling for existence by mining small deposits of copper ore; because of high costs, nothing but rich ore could be mined profitably, and apparently only small and erratic masses of rich ore existed in the district.

After careful examination of the surface of the new property and visits underground into the neighboring mines, Mr. Lowden was convinced that the district contained a large tonnage of low-grade ore which could be mined and treated at a profit if the mines were operated on a sufficiently large scale. To carry out this plan, however, would require more funds for development than he could command. His own property, though included in the area of promising mineralization, was so situated as to constitute an effective operating unit only if combined with several

¹All proper names used in this case are fictitious.

surrounding tracts, among which were some of the small mines already in operation. For the acquisition of these properties his resources were inadequate. Mr. Lowden had determined, therefore, to keep his impressions to himself and to wait for the time when he might accumulate sufficient funds to test their validity, and, with a favorable outcome, establish a profitable mining company.

A little later, however, the mineral promise of the district became evident to other seekers of mines. The North American Exploration Company, after an extensive preliminary investigation, endeavored to acquire all the promising ground in the district. It found Mr. Lowden unwilling, however, either to sell at the price it would pay for undeveloped land or to exchange his holdings for stock in the company. Without possession of this property, the company could not mine advantageously the surrounding tracts. It finally obtained, however, in another part of the district, a compact block comprising about 40% of the favorable ground. Thereupon it organized the Jordan Mining Company and began intensive development. By 1915 a branch of the San Pedro Railway had been extended into the district; the Jordan mine had uncovered 28,000,000 tons of 2.1% copper ore and had begun production at the rate of 25,000,000 pounds a year, at an indicated total cost of 9.95 cents a pound.

The operations of this company increased Mr. Lowden's desire to enlarge his holdings, which he did gradually until he controlled practically all the remainder of the district. In 1920 he organized the National Copper Mine and sold a minority interest to close acquaintances in the cattle business for enough funds to develop the property. The company started a thorough developmental survey by churn drilling. The results from the start justified his belief; by 1924 the entire holdings had been tested, and over 90,000,000 tons of ore of a grade sufficient to assure highly profitable operation had been proved. The ore was of the so-called "porphyry" type and shallow, so that mining by steam shovel was feasible.

By 1924, however, Mr. Lowden was 68 years old and reluctant to undergo the further strain of bringing the property to the operating stage, since the developments just completed already assured fortunes to himself and his associates. Inasmuch as Mr. Lowden had no heirs competent to take over the direction of the property

and as his associates in the company were unskilled in mining, he decided to sell the mine.

The Cuprite Copper Company, a powerful organization, gradually had expanded its operations until it now owned several large mines, a refinery on the Atlantic Coast, and a selling agency. Learning that the National Copper Mine was for sale, it approached Mr. Lowden with the intention of purchasing the mine. The company arranged for a thorough examination of the property by its engineers, the presumption being that, if the report of the engineers supported the owners' claims as to tonnage and grade, the Cuprite Copper Company would make an offer for the mine. Mr. Lowden, the chief owner, was fully aware of the value of the property; both parties knew that the Jordan Mining Company, an active competitor of the Cuprite Copper Company, still desired the National Copper Mine property and probably would be willing to pay a fair price for it, now that its profitable character was assured.

EXHIBIT I

FUNDAMENTAL DATA FOR VALUATION OF THE PROPERTY OF THE NATIONAL COPPER MINE

Total ore developed (on basis of 1.15 % minimum assay)...	91,300,000 tons
Ore so situated as to be available for mining.....	93 %
Average copper content of available ore.....	1.97 %
Average gold and silver content of available ore.....	44 cents per ton of ore
Estimated net recovery of copper.....	84 %
Estimated net recovery of gold and silver.....	70 %
Estimated cost of stripping (that is, removing worthless overburden) to be completed in three years.....	\$4,200,000
Estimated operating cost per pound of marketable copper produced, if operated at a rate of 3,000,000 tons per year	9.88 cents
If at 6,000,000 tons per year.....	8.40 cents
If at 12,000,000 tons per year.....	7.14 cents
Estimated cost of plant and equipment to be completed in period of three years,	
If operated at rate of 3,000,000 tons per year.....	\$ 5,389,000
If operated at rate of 6,000,000 tons per year.....	8,622,000
If operated at rate of 12,000,000 tons per year.....	13,795,000
Interest rate (so-called security rate) to be assumed on invested sinking fund for amortization of capital during the life of the mine.....	4 %
Interest rate (so-called normal rate) on well-secured loans; or the normal value of money to the investor.....	6 %
Interest rate (so-called profit-risk rate) on investment, to be decided upon between limits of.....	6-10 %

The report of the Cuprite Copper Company's engineers confirmed what had been claimed for the property. The two com-

panies then, in 1925, were confronted with the problem of determining independent valuations that would be fair to both parties to the transaction, and close enough to permit a sale. After several conferences, the two parties agreed that the valuation for fixing the purchase price should be based on the fundamental data shown as Exhibit 1.

Typical profit-risk rates for various types of mines are given in Exhibit 2.

EXHIBIT 2

TYPICAL PROFIT-RISK RATES FOR VARIOUS TYPES OF MINES

- 6%—Extensive and regular coal deposits not subject to serious risks of fire or explosion.
Certain unusually extensive and regular iron ore deposits.
 - 7%—Large, regular iron deposits, well developed.
Extensive, shallow, low-grade copper deposits, highly developed.
Certain unusually regular low-grade vein deposits if thoroughly developed.
 - 8%—Deposits of good regularity and moderate grade which have a long, steady historical record and favorable future prospects but are not developed fully.
 - 9%—Deposits of less regularity, of higher grade or of more erratic history than those classed at 8% but with a reasonably steady future indicated, confirmed by partial development.
Deposits which would take 8% except for indicated short life.
 - 10%—Distinctly erratic or high-grade deposits only partially or developed.
high- Well-developed deposits of short life or those profitable er only at times of especially high prices.
In Hazards of ore supply are most influential in affecting profit general risk rate.
- Hazards of operation, namely, caving, fire or flooding, stand next. A deep old mine is more likely to be damaged by caving than a shallow or young mine. A mine supported by much timbering has a much higher fire hazard than one which uses little or no timber. Flooding will depend both on underground water conditions and on proximity to large bodies of surface water.
- Hazards of geography: (a) cold, heat, fevers, altitude, remoteness, and so forth, will be influential, as they affect the supply, quality, and efficiency of labor, either native or imported; (b) stability or instability of government; tax policies, labor policies, and so forth.

Before the value of the mine could be determined, it was necessary to decide upon the period of years during which the ore would be removed. The most economical rate of operation could be determined by balancing the decrease in operating costs which would result from a more rapid rate of depletion against the increased fixed charges upon the larger investment in operating equipment. The more rapid the rate of removal, the sooner the profits would be made, and the sooner saving would be made on interest on the initial investment in the property. The relation between the cost of producing copper and the price of copper is shown in Exhibits 3, 4, and 5, by figures of two copper companies which operated under conditions comparable to those of the National Copper Mine.

EXHIBIT 3
STATISTICS OF THE ZEPHER COPPER COMPANY

Year	Total Net Pounds of Copper Produced	Average Percentage of Copper per Ton	Average Cost per Pound of Copper Produced (Cents)	Average Price Received per Pound of Copper Produced (Cents)
1905	5,346,936	1.98	10.501†	14.618
1906	5,154,909	1.96	12.442†	17.230
1907	3,989,962	1.93	14.220†	21.786
1908*	54,051,212	1.83	8.850†	13.200
1909	51,749,233	1.59	8.787†	12.915
1910	84,502,475	1.54	8.069†	12.672
1911	93,514,419	1.51	7.866†	12.646
1912	91,366,337	1.36	8.459†	15.839
1913	113,942,834	1.25	8.642†	14.976
1914	115,690,445	1.43	7.245†	13.264
1915	148,397,006	1.43	6.612†	17.679
1916	187,531,824	1.44	6.950†	26.139
1917	195,837,111	1.34	10.995‡	24.186
1918	188,092,405	1.23	12.530§	22.876
1919	105,088,740	1.26	12.366§	17.776
1920	101,897,758	1.16	13.145§	17.737
1921	24,511,593	1.16	11.570¶	12.929
1922	84,777,712	1.26	8.707¶	13.584
1923	195,142,919	1.12	8.735¶	14.376
	1,850,585,830			

* 1908 operations are from July 1, 1907, to December 31, 1908.

† The costs prior to 1917 include all taxes which were minimum, but do not include reserve for depreciation of plant and equipment.

‡ The cost of 10.995 cents includes depreciation of plants and equipment, and all taxes, including Federal.

§ Includes depreciation of plants and equipment, and all taxes except Federal income and profit taxes.

¶ Depreciation excluded.

¶ Includes charges for depreciation of plant and equipment.

Since the price at which the copper obtained from the mine would be sold would affect the profits to be derived from the property, the proper average price to be used in valuating it was important. Exhibit 6 gives the prices of electrolytic copper from

EXHIBIT 4

STATISTICS OF THE PORPER COPPER COMPANY

Year	Total Net Pounds of Copper Produced	Average Percentage of Copper per Ton	Average Cost per Pound of Copper Produced (Cents)	Average Price Received per Pound of Copper Produced (Cents)
1908	3,410,495	2.38	6.42†	13.000
1909	33,283,348	2.34	7.47†	13.000
1910	62,772,342	2.06	7.05†	12.750
1911*	78,541,270	1.80	6.97†	12.500
1912	63,063,261	1.69	8.33†	15.979
1913	64,972,829	1.60	9.51†	14.879
1914	49,244,056	1.48	9.82†	13.396
1915	62,726,651	1.54	8.23†	17.647
1916	90,735,287	1.63	8.86†	25.830
1917	82,040,508	1.46	11.68†	23.750
1918	76,607,062	1.51	15.69†	21.049
1919	43,971,892	1.60	16.14§	18.666
1920	48,311,985	1.45	17.28§	17.767
1921	9,362,325	1.49	12.34||	12.535
1922	23,762,675	1.60	12.40†	13.611
1923	61,573,246	1.31	10.92†	14.322
	854,379,232			

* The 1911 operations are from October 1, 1910, to December 31, 1911.

† Includes depreciation of plants and equipment and all taxes.

‡ Includes depreciation of plants and equipment and all taxes, except Federal.

§ Includes depreciation of plants and equipment and all taxes, except Federal income and profit taxes, for which no reserves were set up in 1919 and 1920.

|| Excludes depreciation of plant and equipment, but includes all taxes, except Federal.

EXHIBIT 5

ZEPHER COPPER COMPANY

PER TON OPERATING COSTS ON CONCENTRATING ORE, INCLUDING ALL
FIXED, GENERAL AND MAINTENANCE
CHARGES

Year	Tonnage	Mining	Ore Delivery	Milling	Total	Average Price per Pound of Copper Produced (Cents)
1910	4,340,245	\$0.4097	\$0.2978	\$0.4663	\$1.1738	12.672
1911	4,680,801	.4479	.3078	.4168	1.1725	12.646
1912	5,315,321	.4233	.2848	.4158	1.1239	15.839
1913	7,519,392	.3288	.2797	.3676	.9761	14.976
1914	6,470,166	.3232	.2782	.3536	.9550	13.264
1915	8,494,300	.2441	.2781	.3402	.8624	17.679
1916	10,994,000	.2781	.2792	.3782	.9355	26.139
1917	12,542,000	.4446	.2794	.6930	1.4170	24.186
1918	12,160,700	.5370	.2983	.9277	1.7630	22.876
1919	5,538,700	.4900	.3040	1.2062	2.0002	17.776
1920	5,556,800	.4823	.2591	1.2472	1.9886	17.737
1921	1,220,700	.4998	.1921	1.1697	1.8598	12.929
1922	4,364,251	.3833	.1612	.8417	1.3862	13.584
1923	11,167,800	.3488	.1088	.6116	1.0692	14.376

1885 to 1924. Furthermore, active competition in the copper market was caused by importations of copper, which could be produced more cheaply in South Africa and South America than in the United States. There never had been any duties on the importations of copper into the United States. For approximately two years previous to 1925 there had been agitation for the passage of legislation to protect copper companies in the United States against such importations. Although the Republican administration, then in power, presumably was in favor of a protective tariff, it was doubtful whether the desired duty would be imposed, because of the opposition of large copper companies which owned properties in both South America and the United States. Exhibits 7, 8, 9, 10, and 11 present statistics showing general conditions in the copper trade, which are reflected in the price of copper.

Another factor to be considered was the Federal tax which the National Copper Mine would have to pay on the increase in the value of its property. It had to be taken into consideration also that three years probably would be required to strip the mine and prepare for production, and that possibly an additional year or two would elapse before an economical rate of operation could be attained.

The Cuprite Copper Company had to decide upon a price to offer the National Copper Mine for the mineral deposits which would be high enough to assure its obtaining the property and to prevent sale to a competitor, and low enough to make the investment profitable.

EXHIBIT 6

PRICES OF ELECTROLYTIC COPPER AT NEW YORK MONTHLY AVERAGE,
1885-1924

Year	Price (Cents)	Year	Price (Cents)	Year	Price (Cents)	Year	Price (Cents)
1885	10.77	1895	10.45	1905	15.590	1915	17.275
1886	10.53	1896	10.70	1906	19.278	1916	27.202
1887	11.41	1897	10.80	1907	20.004	1917	27.180
1888	14.66	1898	11.70	1908	13.208	1918	24.628
1889	12.05	1899	16.67	1909	12.982	1919	18.691
1890	14.75	1900	16.19	1910	12.738	1920	17.456
1891	12.14	1901	16.117	1911	12.376	1921	12.502
1892	11.39	1902	11.626	1912	16.341	1922	13.382
1893	10.32	1903	13.235	1913	15.269	1923	14.421
1894	9.25	1904	12.823	1914	13.602	1924	13.024

SOURCE: *Engineering and Mining Journal*.

CUPRITE COPPER COMPANY

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EXHIBIT 7

YEARLY WORLD PRODUCTION AND CONSUMPTION OF REFINED COPPER

Production (Long tons)		Consumption (Metric tons)	
1900.....	486,600	Not available	
1901.....	517,865		
1902.....	548,604		
1903.....	586,143		
1904.....	649,300		
1905.....	689,784		
1906.....	712,934		
1907.....	709,736		
1908.....	744,240		
1909.....	836,870		
1910.....	861,109		
1911.....	878,511		
1912.....	982,577		
1913.....	955,947		
1914.....	989,174		
1915.....	1,044,688	1915.....	1,133,800*
1916.....	1,362,586	1916.....	1,343,200*
1917.....	1,394,276	1917.....	1,381,900*
1918.....	1,377,416	1918.....	1,389,800*
1919.....	988,844	1919.....	976,392
1920.....	932,296	1920.....	1,058,864
1921.....	534,103	1921.....	673,185
1922.....	846,056	1922.....	1,005,513
1923.....	1,300,112	1923.....	1,210,362
1924.....	1,458,737		

* Does not include Belgium.

DISTRIBUTION OF PRODUCTION IN 1923

(Long tons)

United States.....	684,540
Mexico, Canada, and Cuba.....	102,269
South America.....	257,766
Europe.....	91,892
Asia.....	64,790
Australasia.....	17,946
Africa.....	73,909
Other.....	7,000
Total.....	1,300,112

SOURCES: *Metal Statistics*, 1924, p. 235; *Year Book of the American Bureau of Metal Statistics*, 1923, pp. 8 and 35.

EXHIBIT 8

UNITED STATES PRODUCTION, CONSUMPTION, AND STOCKS OF COPPER,
1909-1924

(Pounds)

Year	Production	Consumption	Stocks January 1 of Each Year
1909.....	1,092,951,624	705,051,591	121,876,759
1910.....	1,080,159,509	749,426,542	141,486,244
1911.....	1,097,232,749	709,611,605	122,803,656
1912.....	1,243,268,720	819,665,948	88,372,195
1913.....	1,224,484,098	812,268,639	105,497,683
1914.....	1,150,137,192	701,624,158	90,385,402
1915.....	1,388,009,527	1,136,618,187	173,640,501
1916.....	1,927,850,548	1,478,881,871	82,429,666
1917.....	1,886,120,721	1,394,829,715	128,000,000
1918.....	1,908,533,595	1,661,669,576	114,000,000
1919.....	1,286,419,329	914,471,572	180,000,000
1920.....	1,209,061,040	1,053,838,558	631,000,000
1921.....	505,586,098	610,988,744	659,000,000
1922.....	944,024,741	890,372,627	459,000,000
1923.....	1,477,000,000	1,305,000,000	216,000,000
1924.....	1,628,000,000	1,495,500,000	256,000,000

SOURCES: *Metal Statistics*, 1924, pp. 237 and 247, and *American Metal Market Reporter*, February, 1925.

EXHIBIT 9

UNITED STATES IMPORTS AND EXPORTS OF COPPER, 1915-1923

(Long tons)

Year	Imports	Year	Exports
1913.....	181,000	1913.....	382,810
1914.....	134,000	1914.....	360,229
1915.....	137,500	1915.....	276,344
1916.....	199,000	1916.....	327,310
1917.....	242,000	1917.....	493,256
1918.....	251,000	1918.....	328,844
1919.....	187,000	1919.....	227,169
1920.....	196,500	1920.....	274,688
1921.....	151,000	1921.....	278,401
1922.....	220,000	1922.....	319,118
1923.....	292,000	1923.....	351,959
1924.....	339,000	1924.....	451,108

NOTE: Commencing January, 1917, exports to Canada are included.
SOURCE: *Metal Statistics*, 1924, pp. 255 and 259.

EXHIBIT 10

TOTAL CAPACITY IN POUNDS OF THE ELECTROLYTIC REFINERIES
OF THE UNITED STATES AND CANADA AT END OF YEAR,
1912-1923

Year	Pounds
1912.....	1,648,000,000
1913.....	1,768,000,000
1914.....	1,778,000,000
1915.....	1,892,000,000
1916.....	2,496,000,000
1917.....	2,794,000,000
1918.....	2,794,000,000
1919.....	2,746,000,000
1920.....	2,703,000,000
1921.....	2,718,000,000
1922.....	2,718,000,000
1923.....	2,718,000,000

SOURCE: *Year Book of the American Bureau of Metal Statistics*, 1923, p. 15.

EXHIBIT 11

USES OF COPPER IN THE UNITED STATES

	1920	1921	1922
Electrical manufactures.....	25.26%	28.74%	24.65%
Telephones and telegraphs.....	9.06	11.94	11.00
Light and power lines*.....	4.38	7.29	8.93
Wire and rods.....	7.95	8.51	8.34
Automobiles†.....	9.00	10.32	13.34
Buildings‡.....	5.13	4.90	6.77
Locomotives.....	.88	.65	.46
Railway cars.....	.64	.61	.68
Air brakes.....	.41	.37	.51
Shipbuilding.....	5.65	5.30	.58
Bearing metal and bushings.....	6.24	3.10	3.85
Valves and pipe fittings.....	1.86	1.27	1.83
Ammunition.....	1.74	1.82	1.33
Lubricators, etc.....	.45	.18	.50
Condensers.....	.45	.44	.44
Fire-fighting apparatus.....	.30	.25	.29
Copper bearing steel.....	.17	.19	.18
Coinage.....	.23	.32	.04
Other uses.....	7.99	8.08	8.84
Manufactures for export.....	12.21	5.72	7.44
Total in manufactures.....	100.00%	100.00%	100.00%

* Outside wiring, exclusive of trolley lines.

† Exclusive of electrical manufactures.

‡ Does not include generators, motors, and so forth.

SOURCE: *Metal Statistics*, 1924, p. 251.

COMMENTARY: This case, which involves the valuation of a wasting asset, necessitated the capitalization of an annuity (yearly operating income) for the estimated life of the mine. From this had to be deducted the present worth of necessary capital expenditures for completion of mine development and equipment.

The impersonal or mathematical solution of the problem demanded, in addition to the data given, selection and adoption of the following factors: (a) average rate of working, and therefore indicated life of the mine; (b) average future price of copper over the indicated life of the mine; (c) appropriate rate of interest (profit-risk rate) at which to discount future operating income to present value; and (d) date at which the additional outlays for development and equipment would be required.

(a) Determination of the rate of working would rest on a proper balancing of the advantages of: (1) lower unit cost through increased output, and (2) earlier realization of total profit, against the disadvantages of: (1) increased capital outlay for larger output of a wasting asset, and, possibly, (2) adverse effect on copper prices if too heavy a production were attempted from this property.

(b) The future price of copper could be forecast only by taking account of past price behavior in the light of future indications of supply and demand. Steadily in the past demand had mounted, and production to meet the demand had been forthcoming, with the effect on price that the past statistics reveal. Would the rate of growth of demand persist, increase, or decline over the indicated life of this property? Would enlargement of known mines enable output to keep up with demand at a constant price; would increased price be required to bring out the necessary production; or, on the contrary, would there be an overproduction save through stimulation of consumption by a lowered price? Were the limiting controls on consumption and on production of similar and related origin or were they independent? Which would dominate?

(c) The appropriate discount rate would have to reflect the degree of risk to principal and income involved in an investment of this kind. The physical stability of the mine as a steady producer of the estimated metal content, and the hazards involved in the estimates of operating cost, selling price, and equipment expense were here involved.

(d) If the entire outlay for additional development and equipment had to be made before production could begin, the net deduction from present value on this account would be greater and the present value itself would be less (because of deferred receipt of income) than if part of these additional expenditures could properly be deferred for a year or more, production being started in the meantime.

The actual, as contrasted with the mathematical, solution of the problem of arriving at a purchase price involves determination, not of precise values for the various factors outlined above, but rather of the range of values for such factors within which range one would be safe in meeting and accepting the viewpoint and arguments of the seller.

April, 1927

L. C. G.

PACIFIC RUBBER COMPANY¹

MANUFACTURER—RUBBER PRODUCTS

PURCHASING—*Manufacturer's Policy, in View of Organized Attempts to Reduce Fluctuations in Price of Raw Material.* A rubber manufacturing company, like other companies in the industry, had experienced difficulty in operation on account of wide and rapid fluctuations in the price of crude rubber. By 1928, three different devices had been instituted to remedy conditions in the industry: the Stevenson Restriction Plan, which became operative at the end of 1922; the Rubber Exchange of New York, Inc., which was opened in 1926; and a national reserve of rubber in the United States, established in 1926. Subsequent to severe inventory losses sustained in the years 1920-1922, the company's purchasing had been upon a hand-to-mouth basis. In 1928, the company raised the question of whether, in view of these three devices, its purchasing policies were best adapted to yield the most satisfactory results.

(1928)

The Pacific Rubber Company, located in Akron, Ohio, was one of the leading manufacturers of rubber tires and other rubber products in the United States. This company, as well as other companies in the industry, had been experiencing difficulty in its operations on account of wide and rapid fluctuations in the price of crude rubber. Several devices had been instituted to remedy the difficulties in the industry, both in the producing areas and in the consuming markets. The Stevenson Restriction Plan had become operative at the end of 1922. The Rubber Exchange of New York, Inc., had been opened in February, 1926. A national reserve, or pool, of crude rubber, to the support of which the Pacific Rubber Company had contributed, had been established later in 1926.

Prices had remained relatively stable in 1927. Beginning in February, 1928, the price of crude rubber declined sharply upon the announcement in London of the appointment of a committee to investigate the wisdom of continuing the Stevenson plan. By May, 1928, crude rubber prices were approximately one-half those of six months previous. This change brought about large

¹ Fictitious name.

inventory losses in the industry. The Pacific Rubber Company suffered moderately; the pool was reputed to have lost heavily.

The same purchasing policy had been followed by the Pacific Rubber Company since the establishment of the three devices as existed before, with the exception of a slight change attending the occasional use of the exchange after 1926. The inventory losses early in 1928 brought to the attention of the management of the Pacific Rubber Company the need of reviewing its purchasing and inventory policies in the light of new developments, to see whether or not those policies were best adapted to yield the most satisfactory results to the company. Specifically, questions were raised as to what functionaries and markets, in view of these three devices, the company should use in securing crude rubber supplies; to what extent the company should speculate in crude rubber and in finished goods; and whether it should continue the support of the pool.

Crude rubber is a basic raw material of major importance in the industrial life of the United States. After the invention of the vulcanization process in 1839,² rubber soon became established as a basic industrial material, but it entered into trade only to a small extent until the development of the automobile and the electrical industries. These industries, with their extensive use of rubber, caused the rubber industry to grow with boom-like rapidity. The value of the manufactures of rubber in 1925 was estimated at \$1,255,414,000;³ this figure included tires, as a principal item, and various other commodities such as rubber footwear, insulation, and pharmaceutical supplies.

The production of rubber was revolutionized by the growth in the use of rubber products. Originally the crude rubber was secured from the wild rubber trees of the Brazilian forests, Para being the early market. This production was in small quantities, however, in comparison with the amounts later coming from plantations of the Middle East.⁴ In the Amazon Valley the latex was gathered by natives under unfavorable circumstances; the coagulation process was carried on with crude equipment, and the resulting product was unstandardized as to weight and quality, with a high content of moisture and foreign matter.

² Charles Goodyear discovered the vulcanization process in 1839; it was not patented until 1844.

³ *Statistical Abstract of the United States*, 1926, page 748.

⁴ The Middle East includes Malaya, Ceylon, and the East Indies.

Plantation rubber came into prominence between 1900 and 1910 to meet the increased demand for crude rubber, which the wild rubber sources did not supply. Under British and Dutch enterprise in the Middle East, many acres of hevea trees were planted, which began to yield crops when about six years old. This condition of production permitted the preparation of standard units of crude rubber possessing a standard high quality, at a cost that compared favorably with the costs in Brazil. The industry flourished, and in 1923 there were approximately 3,500,000⁵ acres of hevea trees in the Middle East. The annual production of these plantations for the years 1913-1926 is given in Exhibit 1.

EXHIBIT 1

PRODUCTION OF CRUDE RUBBER IN THE MIDDLE EAST, 1913-1926*
(In long tons)

Year	Production	Year	Production
1913.....	53,322	1920.....	305,038
1914.....	74,529	1921.....	277,466
1915.....	116,286	1922.....	379,438
1916.....	161,800	1923.....	381,930
1917.....	221,371	1924.....	397,422
1918.....	180,996	1925.....	475,440
1919.....	348,936	1926.....	580,000

* Measured by net exports from producing countries.

Source: *Commerce Yearbook*, 1926, Vol. 1.

By 1928, synthetic rubber had been the object of much experimentation. The dependency of United States industry upon this external raw material had stimulated the efforts of research to find ways by which the country could be made independent of foreign rubber sources if occasion should arise. Experiments with the sap of pine trees had been successful upon a laboratory scale, but the cost of production, even though the enterprise were upon a commercial scale, would necessitate a higher price than that usual for crude rubber.

Reclaimed rubber had become a factor in the rubber market just as had scrap iron in the iron market. Marked technical improvements in the process of reclaiming rubber had been made

⁵ Hotchkiss, H. Stuart, "The Evolution of the World Rubber Situation," *Harvard Business Review*, Vol. II, No. 2, page 135.

which increased the uses to which the product could be put and which lowered the production cost.

The average annual prices of crude rubber over the period 1910-1927 reveal the trend of the interaction of the increasing supplies of and demands for the commodity. These figures are given in Exhibit 2.

EXHIBIT 2

AVERAGE ANNUAL PRICES OF CRUDE RUBBER,* 1910-1927
(In cents per pound)

1910.....	206.6	1919.....	48.7
1911.....	141.3	1920.....	36.3
1912.....	121.6	1921.....	16.4
1913.....	82.0	1922.....	17.6
1914.....	65.3	1923.....	29.7
1915.....	65.7	1924.....	26.2
1916.....	72.5	1925.....	72.5
1917.....	72.2	1926.....	48.6
1918.....	60.2	1927.....	37.9

* Ribbed, smoked sheets, at New York, spot prices.

Sources: 1910-1912, *Statistical Abstract of the United States*, 1924, page 651.

1913-1927, *Standard Trade and Securities Service*, Annual Statistical Bulletin, 1927, and January Supplement, 1928.

The high prices which prevailed prior to 1920 tended to exaggerate the demand for crude rubber, and after the World War plantings became more numerous. Since crops could not be harvested until the trees attained maturity, however, the new production did not begin to reach the market until 1924. During the years from 1922 to 1927 the rubber-using industries did not increase their demand for crude rubber at the same rate as in the inflation years, and a condition of overproduction resulted.

The Stevenson Restriction Plan was adopted in 1922 by the British rubber interests in Ceylon and Malaya to meet the overproduction situation. By that year 93% of the world's production of rubber was in the Middle East.⁶ The plan, in brief, regulated

⁶ Ninety-eight per cent of the crude rubber exported from the Middle East in 1924 was produced in the British and Dutch colonies as follows: British, 53%; and Dutch, 45%. (Trade Information Bulletin No. 385, United States Department of Commerce.) In 1920, it was estimated that 74% of the total supply exported from the Middle East had been produced in the British colonies. These figures show that the trend of the export ratio was in favor of the Dutch colonies. On account of the restriction plan, however, the amounts exported from the British colonies after 1922 were less than the amounts produced. This fact was indicated in the Annual Report of The Rubber Exchange of New York, Inc., for 1926, which stated that 62% of all plantation rubber was produced in the British possessions, and that 33% was produced in the Dutch possessions.

the amount of crude rubber which each producer might market.⁷ In December of 1927 the export license system provided for by the revised plan was amended to make the unexported allowable volume within any one quarter non-cumulative in the next until all allowances for the latter quarter had been exported.⁸

The success of the Stevenson Restriction Plan is suggested by the trend of crude rubber prices after its inauguration. Prices rose from a low point of 13 cents a pound in March, 1922, to 40 cents a pound in December, 1924.⁹

The quickening of demand, because of the recovery of the rubber consuming industries after the depression of 1920-1922, was pronounced, and the surplus stocks which had resulted from industrial inactivity soon were depleted. This increased demand, as well as the regulated supply, was a factor in the rise of crude rubber prices. Early in 1925 these two forces yielded a situation that suggested a world rubber shortage, and manufacturers bid

⁷ In October, 1926, the Stevenson Restriction Plan was revised; after revision it was as follows:

"From November 1, 1926, the export of rubber from Ceylon and Malaya will be subject to the following regulations: It is not contemplated that any change shall be made in these regulations for a period of 12 months at least, but if it is decided at the end of that time to continue the temporary policy of restriction for a further period any changes in the regulations which may then be considered desirable may be made.

"(1) If the average price of rubber in London is less than 42 cents a pound, but not less than 30 cents a pound, during any quarter, the percentage of standard production which may be exported at the minimum rate of duty for the ensuing quarter will be reduced by 10. If, however, the reduction to be effected under this regulation is a reduction from a figure of 100%, the reduced percentage for the ensuing quarter will be 80%.

"(2) If such average price for any quarter is not less than 42 cents a pound, but less than 48 cents a pound, there will be no change in the percentage for the ensuing quarter. If, however, in each of three consecutive quarters such average price is not less than 42 cents a pound, the percentage for the ensuing quarter will be increased by 10%.

"(3) If such average price for any quarter is 48 cents a pound or over, the percentage will be increased by 10% for the ensuing quarter. If, however, the increase to be effected under this regulation is an increase from a figure of 80%, the increased percentage for the ensuing quarter will be 100%.

"(4) If such average price is below 30 cents a pound in any quarter the percentage will be reduced to 60% for the ensuing quarter.

"(5) If such average price is over 72 cents a pound in any quarter the percentage will be increased to 100% for the ensuing quarter.

"(6) In no case will the percentage be increased above a figure of 100% or decreased below a figure of 60."

Source: British Colonial Office release.

(Prices in this release have been changed from shillings and pence to cents.)

⁸ No changes were made in the export schedules under the Stevenson Restriction Plan for the quarter beginning February 1, 1928.

⁹ These quotations represent the extreme prices at which transactions occurred and hence differ from the averages of prices given later in Exhibit 3.

up the price to over a dollar a pound in efforts to cover their operating needs. This rise in price made the Stevenson Restriction Plan ineffective, and exports of total production capacity were permitted. It was soon found that the threatened shortage was fiction, and prices receded.

The function of the Stevenson plan was primarily one of control of the amount offered for export in the producing areas. In London and New York, the principal primary rubber markets of the world, there were other difficulties supplementing those in Singapore, the leading crude rubber market in the producing areas of the Middle East. The common practice of the leading manufacturers of rubber products in the United States was to place orders for their regular requirements with their agents in Singapore. The extent to which such orders were placed depended on the price at the time of an order. The supplementary requirements of the large companies and the regular supply for the smaller companies were secured for the most part from or through rubber importers or rubber brokers in New York City.

Under this organization of the market the prices of crude rubber fluctuated widely, much to the distress and embarrassment of manufacturers, the value of whose inventories of raw and finished goods was affected by the fluctuations. The organization of the primary market had been the first step taken to improve the situation; early in 1926, the Rubber Exchange of New York was opened. This exchange provided an established place in which to deal in crude rubber futures. Spot transactions were not conducted on the exchange. This futures market served as an aid to manufacturers and dealers in protecting their purchases and sales. The exchange was moderately successful in its early days, and in 1927 it was in general use both for hedging purposes and for purchasing for actual delivery. It was also a device adapted to the use of speculators in carrying on their operations. Large manufacturers continued to secure their regular supplies from outside sources. The prices in outside transactions approximated those on the exchange for similar delivery.

An organized futures market in crude rubber was provided by the exchange, but there was still no assurance that the prices of the commodity would not continue their violent fluctuations.¹⁰

¹⁰ The average annual fluctuation in crude rubber prices from 1906 to 1925 was 44.2 cents per pound.

The manufacturers of rubber goods wished to have the value of their inventories protected by relative stability in the price of the raw material. The situation that tended to make the price jump was usually the rumor that the free supply available in the market was less than enough for the needs of a few weeks. Fearful of having insufficient stocks to maintain operations, some buyers would endeavor to cover their requirements at any cost. Speculators took advantage of these situations and exaggerated them whenever possible. The movement of the prices of crude rubber in the New York market, especially in 1925, reflected this mercurial situation. The average monthly prices of crude rubber at New York for the years 1922-1927 are given in Exhibit 3.

EXHIBIT 3

AVERAGE MONTHLY PRICES* OF CRUDE RUBBER AT NEW YORK,
JANUARY, 1922, TO DECEMBER, 1927
(In cents per pound)

	1922	1923	1924	1925	1926	1927
Jan.....	19.2	32.7	26.0	36.4	79.6	39.3
Feb.....	16.0	35.5	25.4	35.6	62.1	38.2
Mar.....	14.4	34.6	23.0	41.3	58.4	41.0
Apr.....	16.1	32.7	22.8	44.5	50.9	40.9
May.....	15.3	28.7	19.7	57.1	48.1	40.8
June.....	14.9	27.3	18.9	77.1	43.1	37.0
July.....	14.8	26.0	21.2	104.2	41.3	35.0
Aug.....	14.2	29.2	26.3	80.8	38.0	35.1
Sept.....	14.5	29.3	27.7	89.3	41.3	33.8
Oct.....	19.9	27.0	31.4	99.6	42.7	34.4
Nov.....	24.1	27.3	34.3	104.8	39.9	37.9
Dec.....	27.5	26.7	38.1	100.0	38.2	41.0
Average for year... ..	17.6	29.7	26.2	72.5	48.6	37.9

* Average of one price weekly, ribbed, smoked sheets, at New York, spot prices.

Source: *Standard Trade and Securities Service*, Annual Statistical Bulletin, 1927, and January Supplement, 1928.

A national reserve of crude rubber in the United States had been conceived as an instrument which would stabilize prices at an economic level. In 1926, such a reserve was established, supported by contributing manufacturing companies. Thereafter, the presence of the reserve did away with fear that the supply in the domestic market was so nearly depleted as to warrant panic coverage. The reserve, warehoused in the rubber centers of the country, was reputed to be about 20,000 tons.

The psychological effect of the presence of this reserve appeared to be great, since up to December, 1927, the reserve scarcely had been drawn upon. The price of crude rubber had remained even more stable than had been anticipated, and the level at which it had remained was lower than before the establishment of the reserve, in spite of the fact that under the Stevenson Restriction Plan there had been a gradual reduction in exportable allowance down to 60%. The trend of prices for the period 1926-1927 revealed this stability.

The purchasing policies of the Pacific Rubber Company had been upon a hand-to-mouth basis subsequent to the severe inventory losses of 1920-1922. In December, 1924, accordingly, the company's supply of crude rubber on hand was low. Early in 1925, alarmed by the threatened rubber shortage which increased prices greatly, the company undertook to expand its experimental plantation activities. It planted 20,000 acres of hevea trees in the Dutch colonies of the Middle East during the two succeeding years. It decided simultaneously to increase its inventories, in order to insure a larger reserve than it then had for current operations. The fall in crude rubber prices in 1926 caused a severe depreciation in the value of these inventories.

The officials of the Pacific Rubber Company had been prime movers in the establishment of the national reserve of crude rubber and had contributed to the pool organized for its purchase.

The officers of the Pacific Rubber Company did not utilize the rubber exchange for hedging transactions, since they believed the reserve would remove major fluctuations in the prices of crude rubber. They were confident that they could interpret correctly the factors causing minor fluctuations, and that, accordingly, they could conduct their purchases intelligently.

The inventory policies of the Pacific Rubber Company are revealed in part by the index numbers for sales and inventories during the period 1921-1926, given in Exhibit 4.

In 1927, the Pacific Rubber Company purchased about 75% of the crude rubber it used through its agent in Singapore. It secured supplementary requirements through brokers and dealers in New York City. The company's plantation supplied less than 5% of the amount consumed by the company in 1927.

Net earnings of the company during the years 1922-1926, expressed as index numbers, are given in Exhibit 5.

EXHIBIT 4

INDEX NUMBERS OF SALES AND INVENTORIES OF THE PACIFIC RUBBER
COMPANY 1921-1926
(1923 = 100)

YEAR	SALES	INVENTORIES	
		Finished Goods	Materials & Supplies*
1921.....	64	120	104
1922.....	80	98	90
1923.....	100	100	100
1924.....	109	95	90
1925.....	161	104	145
1926.....	180	114	185

* Includes also goods in process.

EXHIBIT 5

NET EARNINGS OF THE PACIFIC RUBBER COMPANY, EXPRESSED AS
INDEX NUMBERS, 1922-1926
(1923 = 100)

Year	Net Earnings Available for Dividends
1922.....	67
1923.....	100
1924.....	187
1925.....	208
1926.....	135

COMMENTARY: The problems which confronted the Pacific Rubber Company in the above case illustrate the importance of exercising care in dealing with the factors related to securing raw materials. The disadvantages of widely fluctuating prices of these raw materials are indicated in a forceful way. The confusion in the crude rubber market has been the principal difficulty with which both rubber producers and the manufacturers of rubber products have had to contend.

The Stevenson plan was a regulation of the amount of crude rubber exported from the British colonies. At low prices the amount supplied was restricted; at high prices the restriction was removed, in part or in total. The effect tended to be to raise the level of prices, and in so far and as long as the plan affected a dominant portion of the total supply, as it did in the first years of its existence, it was influential in accomplishing its purpose. Forces on the demand side of the market,

however, frequently have had sufficient effect to offset or to accentuate the results of the operation of the Stevenson plan, and the inflexibility of the adjustment of the exportable allowance has demonstrated the failure of the plan to bring about the price stabilization which was one of its major objectives.

Production was unrestricted in the Dutch colonies, and accordingly prospered under the British policy. Gradually the volume of production not under the jurisdiction of the Stevenson plan became greater than that in the British territories and the effectiveness of the act tended to decline. When the prospect of the repeal of the act was in sight, however, prices fell sharply. This fact might be interpreted as indicating that the Stevenson plan had been successful in causing a higher plane of prices than would have existed otherwise. The stabilizing effect of the plan on crude rubber prices never evidenced itself; rather, the contrary tendency was noted on account of the inflexibility of the adjustment of the export allowance to price changes.

The rubber exchange is an organization of the functionaries operating in the primary consuming market, New York City. It provides a common place for traders to conduct their business; it enhances the regularity of price quotations; and it affords an opportunity for trading in futures. The tendency of these several factors has been to stabilize crude rubber prices. The marked decline early in 1928 was orderly, in large measure on account of the exchange, and also on its account the extent of the decline doubtless was less than otherwise would have occurred. To use a statistical analogy, crude rubber prices since 1926 have acted as though a moving average centered had been taken of them. Part of the explanation lies in the operation of the rubber exchange. The fact that speculators, principally specialized futures traders, have entered the market to an increased extent has tended to stabilize prices. The theoretical effect of an increased number of people in the market and of an increased volume of trading is to decrease incidental fluctuations and to make the extremes of movement less marked.

The rubber pool is a semi-free supply of crude rubber in the consuming market, held for purposes of stabilizing prices. In addition, its members are motivated by a desire to lose as little as possible and perhaps to gain directly from the operations of the pool. The effect of the pool has tended to be the stabilization of crude rubber prices, and in so far and as long as no major inequivalences occur in supply and demand, it has succeeded in its purpose, and with the Exchange deserves credit for the relative stability of prices in 1926 and 1927. Temporary weaknesses in the market would be strengthened by buying for the account of the reserve, and bullish tendencies would be curbed by selling from the reserve. The marked decline of crude rubber prices early in

1928, however, was the result of a major disturbance, the prospect of the discontinuance of the Stevenson plan, and the pool was powerless to check the fall or to save itself. To this extent the pool appears economically unsound, and it is doubtful whether the benefits derived from it when it is able to operate effectively balance the losses resulting from situations too big for it to control.

The question of policy involved in the decision as to whether or not the Pacific Rubber Company should continue its membership in the pool may be treated briefly on the basis of the foregoing analysis.

At the present time, the pool appears to be a temporary makeshift, which in time may be superseded by a comprehensive organization of the rubber industry involving both producers and manufacturers. The present secret operations of the pool serve a purpose, however, and, if an optimistic view of the future be taken, no major inequivalences between supply and demand may occur. In addition, the stability of crude rubber prices during the last three-quarters of 1926 and during 1927 was such an aid to manufacturing operations that the Pacific Rubber Company might have considered its share of the early 1928 losses as a less severe setback than would have been experienced without the pool. The harm of the recent price decline episode had been done, moreover, and to withdraw from the pool when there was a favorable prospect of a gradual increase in prices would seem to have been inopportune. Except in the instance of major movements of crude rubber prices, the pool is economically sound.

The purchasing policy of the Pacific Rubber Company appears to have been adapted to the situation. The purchases of the company were divided into those which were regular, comprising the minimum requirements, and those which were incidental, comprising the remainder of total requirements not supplied from regular purchases. For regular purchases it would appear wise to have an agent of the company in Singapore who was in intimate touch with the situation and who could see that the qualities and kinds of rubber needed were secured. The Goodyear Tire and Rubber Company does not have an eastern agent, but the other large companies do. For incidental requirements it would appear best to buy of dealers in New York and in other primary consuming rubber markets. Quick shipment may be secured in this way and an inventory policy may be followed which will be more satisfactory than otherwise.

The inventory policy of the Pacific Rubber Company should be based to a considerable extent upon the conditions under which crude rubber is supplied and upon its price characteristics. Since the trip between the Middle East and New York requires approximately two months, an inventory large enough to supply two months' regular requirements is needed at all times. In addition, there is a seasonal

factor in the continuity of production of crude rubber brought about by climatic factors; this circumstance suggests the advisability of securing supplies in the plentiful months for the less plentiful periods. Finally, crude rubber cannot be stored indefinitely without a degree of depreciation of quality and the aggregation of substantial carrying charges.

The price characteristics of crude rubber have been changing, and because of one or several of the devices purposed to stabilize prices, incidental fluctuations have been reduced. Prices will continue to vary sufficiently, however, to make highly significant the amount of money invested in inventory. A study of crude rubber prices reveals that certain movements can be forecast but that others cannot. A shrewd purchasing agent is able occasionally to understand the situation in the market sufficiently well to warrant going long or short in the market and thus to secure a profit. In that event it appears unwise to hedge, and speculation is justified. When there are many factors in the situation which do not indicate price movements clearly, however, speculation would be of the undesirable kind. At such times it would seem best to hedge purchases by entering into suitable futures contracts.

In summary, therefore, the best inventory policy of the Pacific Rubber Company would seem to be as follows: (1) Sufficient crude rubber in the company's domestic warehouses to supply factory demands, including enough to tide over such needs in case a shipment were delayed or lost. A supply for three months would seem to be satisfactory for this purpose. (2) Two months' supply on the sea. (3) Additional amounts, deemed advisable on account of variations in crop conditions. The company should speculate when given fair assurance that price movements can be forecast, but when the situation is not clearly understandable purchases should be hedged. There is not sufficient correlation between the movement of crude rubber prices and the prices of rubber goods to justify hedging against fluctuations in the prices of the latter.

September, 1928

H. N. G.

ANDREWS COMPANY¹

IMPORTER—SURGICAL SUPPLIES

IMPORT DECLARATION—*Effect of Price Revision on Declared Valuation of Imports.* A company operating as the American agent for an English manufacturer of surgical supplies was obliged by the customs office to declare finger cots received from the manufacturer at the catalog price of 21 shillings a gross, in spite of the fact that the company received a discount of 10%. When, in consideration of a quantity purchase of this merchandise, the manufacturer lowered the price to 17 shillings 6 pence, the customs office refused to permit a valuation for duty at this lower price, contending that, even though the manufacturer would grant to any customer a similar price for as large a quantity, the company had not purchased in the usual quantity and hence must declare the merchandise at the value of orders of the usual size. The company decided to declare all future shipments of merchandise at the manufacturer's catalog price.

(1923)

The Andrews Company was organized in 1921 to act as the American agent for an English manufacturer of surgical supplies. Early in 1923, the manufacturer's price to the Andrews Company upon a specific grade of finger cots was reduced from 21 shillings to 17 shillings 6 pence per gross. It was necessary for the president of the Andrews Company to determine the value at which future shipments should be declared for duty.

The company imported annually merchandise to the value of from \$50,000 to \$60,000. Over 75% of these imports consisted of finger cots, which were sold, both under the manufacturer's brand name and unbranded, to wholesale druggists, hospital supply companies, and agents situated in the eastern and middle western parts of the United States. Previous to 1923, the number of finger cots imported by the company had fluctuated between 400 and 600 gross per month. In that year, as a result of the establishment of new agencies, the company was able to increase its imports to 1,000 gross per month. Because of the increased quantity of purchases of this article, the manufacturer reduced his price on

¹ Fictitious name.

all purchases which averaged 1,000 gross or more per month from 21 shillings to 17 shillings 6 pence per gross. The Andrews Company was the largest single purchaser of finger cots from the manufacturer. Usual wholesale purchases of that article amounted to from 100 to 500 gross a month. Twenty-one shillings remained the standard wholesale list price. The manufacturer had considered the Andrews Company as an agent, not as a wholesaler, and, therefore, had given the company a discount of 10% from the list price. The Andrews Company was to continue to receive this discount on the new price.

The duty which the company had been paying on the finger cots amounted to 25% ad valorem, or 5 shillings 3 pence per gross converted into dollars at the rate of exchange prevailing on the day the merchandise was shipped from England.² A reduction in the declared valuation to 17 shillings 6 pence, if allowed by the customs office, would reduce the import duty to 4 shillings 4½ pence per gross.

The company had found that for purposes of duty it was necessary to declare a value upon the finger cots which was 10% higher than the price actually paid. The English manufacturer distributed his products in England through wholesalers, and published a catalog which contained the prices charged the wholesalers for each article which he manufactured. A copy of this catalog was kept in the customs offices of the port through which the Andrews Company imported its merchandise and was used by the customs officials for determining the value of the products in England.

The customs officials always had refused to allow the Andrews Company to declare for purposes of duty a value per gross of

² Tariff Act of 1922, Paragraph 1439:

"Manufactures of bone, chip, grass, horn, quills, India rubber, rubber, gutta percha, palm leaf, straw, weeds or whale bone, or of which these substances or any of them is the component material of chief value, not especially provided for, 25 per centum ad valorem; . . ."

Section 402, 1:

"For the purposes of this act the value of imported merchandise shall be the foreign value or the export value whichever is higher.

b. "The foreign value of imported merchandise shall be the market value, or the price at the time of exportation of such merchandise to the United States, at which such or similar merchandise is freely offered for sale to all purchasers in the principal markets of the country from which exported, in the usual wholesale quantities and in the ordinary course of trade, including the cost of all containers and coverings of whatever nature, and all other costs, charges, and expenses incident to placing the merchandise in condition, packed ready for shipment to the United States."

21 shillings less the discount of 10%, contending that the discount was a special concession to the Andrews Company. The reduced price allowed for quantity purchases was not published in the manufacturer's catalog. At the time the price of the finger cots had been reduced to 17 shillings 6 pence, however, the English manufacturer had made a sworn statement before the American consul in London that a similar price would be offered to any purchaser who ordered 1,000 gross per month. This statement was made especially for the benefit of the Andrews Company. The president of the company believed that, since the lower price had been received because of the large quantity of purchases and since other purchasers of similar quantities would receive the same price, the company was justified in declaring a value of 17 shillings 6 pence. Without further investigation, the value of the first shipment of 1,000 gross was declared at the rate of 17 shillings 6 pence per gross.

The president of the company was notified immediately by the customs officials that he had undervalued his merchandise and was subject to the fine for such action.³ Although he contended that the price was that which any purchaser of similar quantity would pay and showed the sworn statement to prove his contention, the customs officials declared that the Andrews Company had not purchased in the usual quantity and hence had to declare its merchandise at the value of orders of the usual size. They maintained that the sworn statement designated what the manufacturer would do and not what in actual practice he did do.

The president of the Andrews Company consulted his attorney and was advised that the position taken by the customs officials was correct. The company, consequently, paid the increased duty and the fine, the latter amounting to 20% of the value of the order, which was set at 21 shillings per gross.

The president decided to adopt the policy of declaring all future shipments of merchandise at the value listed in the catalog published by the manufacturer, even though these prices did not

³ Tariff Act of 1922, Section 489: "If the final appraised value of any article of imported merchandise which is subject to an ad valorem rate of duty, or to a duty based upon, or regulated in any manner by the value thereof, shall exceed the entered value, there shall be levied, collected, and paid, in addition to the duties imposed by the law on such merchandise, an additional duty of 1 per centum of the total final appraised value thereof for each 1 per centum that such final appraised value exceeds the declared value in the entry."

take into account the agency discount which the Andrews Company received, or the lower price which it paid because of quantity purchases. Some time later the president of the company was advised by the congressman representing the company's district that his original declaration was legal and that, had he appealed the case, he would have received a refund of the increased duty and the fine.

COMMENTARY: The determination of "value" for purposes of ascertainment of duty is a fruitful source of dispute between the importer and the customs administration. Undervaluation is subject to severe penalties. The importer must remember that "value" for purposes of duty may be very different from the price he has actually paid for the goods in the foreign market. While deliberate undervaluation is rare, unintentional undervaluation is frequent, due to the fact that the importer, as in the case of the Andrews Company, is not fully informed as to the technical requirements in value determination as set forth in the Tariff Act and interpreted by the customs administration.

There is apparently no question involved here of deliberate undervaluation. The declared value was the price actually paid by the importer, a price openly quoted to all buyers who purchased in the same large quantities as the Andrews Company. The customs officials refused to allow this valuation to stand, on the ground that the value was not based upon sales "in the usual wholesale quantities and in the ordinary course of trade," as provided in Section 402 of the Tariff Act. The officials held that the large price discount was, as a practical matter, only open to the Andrews Company, the American agent of the English manufacturer, since this company alone was in a position to place such large orders.

In determining the value at which goods shall be entered for customs purposes, the importer cannot safely depend upon the prices paid, or upon what seems reasonable and fair to himself. Especially should the importer be wary about lowering the value of goods which he has been bringing in for a long time at a higher value. The opinion of an experienced customs house broker might well have been sought by the importer in this case. It was possible also for the importer to have consulted the appraiser or examiner of the customs house. While the appraiser's opinion thus given would be in no way binding when the goods were finally entered, the importer would at least have had the advantage of expert opinion on the matter from those most competent to express an opinion. Experience and precedent are very important in such cases. In the matter of valuation for customs, there can be

but one rule, and that is to take no unnecessary chances in lowering valuations. Even then, the importer may find, through no fault of his own, that he has valued his products below the standard set up by the appraisers.

Appeals to congressmen in such matters are likely to be of no avail. A congressman's opinion and advice on details of tariff administration have no more value than his experiences with customs procedure would justify. In matters so highly complicated and technical as customs duties and administrative regulations, the expert services of customs brokers and customs lawyers are well-nigh indispensable. The attorney's advice not to appeal to the Customs Court the decision of the appraisers seems to be sound in this case.

April, 1929

G. B. R.

DALBERE COMPANY¹

IMPORTER—TEA

PURCHASE TERMS—*Change from C.I.F. to C. & F. Terms in Accepting Quotations.* In the six years of its existence, a company importing tea into the United States from China and Java had accepted quotations from exporters on a c.i.f. basis. After six years, however, the company decided to place orders in the future on a c. & f. basis.

MERCHANDISE INSURANCE—*Insuring through Domestic Rather than Foreign Company.* A company which imported tea into the United States from China and Java decided to change its method of insuring imports of merchandise. Instead of accepting quotations on a c.i.f. basis, the company decided to place future orders on a c. & f. basis and to insure its shipments through an open policy with a domestic insurance company, in spite of the fact that a higher rate of insurance payment would be required. The company's decision was based on the fact that domestic insurance companies settled claims within a shorter time than did foreign companies and that their policies granted more inclusive coverage of damage.

(1920)

Since its inception in 1914, the Dalbere Company, tea import merchants, had accepted quotations from tea exporters in China and Java on a c.i.f. basis. After six years of experience, the company had found that there was a risk in accepting foreign exporters' quotations which included insurance. In 1920, therefore, when the company was approached by the representative of an American insurance company, it considered the acceptance of future quotations on a c. & f. instead of a c.i.f. basis.

The Dalbere Company, which maintained its office in New York City, sold tea to wholesale grocers and tea and coffee merchants in the eastern United States. Its importations of tea, which averaged about \$150,000 a year, had shown a steady increase each year since the organization of the company. The tea was purchased in shipments averaging in value from \$1,000 to \$2,000. It was shipped in chests which averaged 85 pounds in weight.

¹Fictitious name.

The terms of payment varied, depending on the exporters' practices, from sight drafts to 90-day drafts. From 60 to 90 days were required to ship tea from China and Java to the United States. On nearly every shipment it was necessary for the Dalbere Company to honor the draft before it received the merchandise. Samples of the tea were forwarded to the Dalbere company by the foreign exporters just before the shipment was made, and the salesmen of the Dalbere Company took orders for the tea while the ship was in transit. Payments were made to the Dalbere Company by its customers in 30 days from date of invoice.

Tea was a perishable product which deteriorated with age. It was susceptible to damage by sweat and dampness during ocean transportation. During the six years in which the company had been engaged in importing, it had not sustained a total loss of any shipment of tea, but about one in twenty chests of tea was damaged sufficiently to necessitate a claim against the insurance company.

Two or three months usually elapsed before the Dalbere Company received reimbursement for damages to any shipment of tea which had been insured by the exporter in a foreign insurance company. This delay occurred even when the policy of the foreign insurance company was marked "payable in New York," because the New York office of the insurance company had to receive the sanction of the home office before any payment could be made. Although the company never had suffered a complete loss of shipment, a delay in reimbursement on a total loss of merchandise which already had been paid for with money borrowed from a bank probably would embarrass the Dalbere Company financially, especially if the value of the shipment were larger than usual. It was customary for American insurance companies to settle claims for damage on imported merchandise within two weeks. For these reasons the company considered the advisability of insuring its importations of tea with an American insurance company instead of permitting the tea to be insured by the exporter.

An open policy was recommended by the representative of the American insurance company. This policy was one taken out by an importer or exporter to cover all his shipments of merchandise. Such a policy kept the merchant constantly insured, but

payment for it was made only on each shipment and amounted to $1\frac{1}{4}\%$ of the insured value of the merchandise. An importer was expected to notify the insurance company of the value of each importation as soon as possible and later to permit the insurance company to verify the value by means of the foreign exporter's invoice. The importer was insured, nevertheless, whether or not notification was made to the insurance company. There was no time limit on the duration of validity of the policy, nor any limitations as to the part of the world from which the Dalbere Company might import. The policy would be drawn up, however, with special reference to tea. The special clauses in the open policy regarding importations of tea were to cover "any damage" to merchandise in transit.² The general clauses regarding protection in marine insurance policies, including open policies and those applying to single shipments, were approximately the same for all insurance companies, American and foreign.

An open policy designated a limit to the amount of any one importation. The limit was established by joint agreement of the insurance company and the importer. It took into account the average value of shipments to the importer, thus preventing an unnecessarily large amount of an insurance company's reserve from being withheld from other uses. Shipments which were larger than the limited amount of the policy required additional insurance, in the form of another policy or of a flyer to the existing policy.

The Dalbere Company had received different policies from its foreign exporters; usually it did not know how or by what company its importations were insured until it received the policy, which was forwarded with the draft and bill of lading of the merchandise. The special clauses in the policies varied with different shipments; all gave limited protection.³ There was no clause

² An example of the special clauses of the open policy follows: "To pay average if amounting to 3 % on each invoice and/or each 5 chests, 10 half chests or 20 boxes in order of invoice, including mould and dampness caused by sweat and sea water and/or any damage occurring while in transit, also to pay for breakage, reconditioning charges and loss in weight irrespective of franchise, but no claim to attach for any loss due to insufficient or unusual packing including the risk of theft and pilferage."

³ An example of the special clauses in a typical policy placed by a foreign exporter to cover one shipment was as follows: "To pay average on each 10 chests, 20 half chests, or 40 quarter chests, running landing numbers but no claim to attach for wet or damp in respect to any package unless the tea therein shall have been in actual contact with sea and river water."

covering "any damage" in transit. For example, a shipment which was damaged by rice was not covered by the foreign insurance policy. Additional clauses were inserted only at the request of the Dalbere Company and then at an extra charge. The cost of insurance placed by foreign exporters was $\frac{1}{2}$ of 1% of the insured value of the merchandise.

The foreign exporters from whom the Dalbere Company purchased most of its tea were agents for insurance companies and preferred to place the insurance with their own companies. The Dalbere Company had confidence in the integrity of its exporters and of the insurance companies which they represented.

C.i.f. quotations to importers were lower than c. & f. quotations plus insurance placed by the importer. Moreover, the routine of placing the insurance with an American company and of notifying the company of the value of each shipment required a slight additional amount of clerical work. The Dalbere Company, nevertheless, had the assurance of the American insurance company's representative that less time would be taken in making settlements and that fewer disputes would arise than under the existing method of insurance, because the clauses in the American company's policy were more inclusive.

The American insurance company's representative stated to the Dalbere Company that an American bank frequently hesitated to extend merchandise letters of credit to an importer unless the bank knew the financial standing of the foreign insurance company with which the importer's policy was placed. The Dalbere Company believed, however, that banks extended credit on the basis of the importer as a risk, rather than of the insurance company. This difficulty, furthermore, had not been encountered by foreign exporters when in presenting the documents of a shipment to a bank abroad they stated that the importer had insured the shipment.

The Dalbere Company decided to take out an open insurance policy with an American insurance company. A liberal limitation of \$25,000 as the value on any one shipment was secured. Although the rate was $\frac{3}{4}$ of 1% higher than the foreign insurance rate, from 1920 to 1924 less time had been required in the settlement of damages and fewer disputes had occurred than with the use of foreign insurance, because of the more complete coverage of the American insurance company's policy.

COMMENTARY: The importer who buys on a c.i.f. basis, paying cash against documents, has only the documents as security for the goods before they are actually delivered, and against any damage that is found upon their delivery. Of the documents, the insurance policy is vital to the importer's protection. Under c.i.f. terms the shipper's contract is fulfilled and his responsibility for the goods ended when he has covered the shipment with the insurance agreed upon, placed the goods in the hands of the steamship company, settled the freight, and forwarded the documents. The steamship company, under the terms of the bill of lading, has removed, for the most part, its responsibility for losses to the goods in transit. Hence, it is the insurance policy on which the importer must rely for reimbursement in case of loss or damage; and the insurance policy is no stronger than the company which issues it.

The greatest weakness in a c.i.f. quotation arises from the fact that it generally leaves the choice of the insurance company to the shipper. Even if financially sound and reliable, an insurance company organized and managed in a foreign country may give inadequate protection in comparison with the best companies that would be available to the importer in his own country and, in case of losses, negotiations between parties separated by long distances and living under entirely different jurisdictions may result in long delays and other difficulties in settlement.

Furthermore, the foreign insurance company, through whom the foreign shipper arranges the insurance, may not have been duly "authorized" or "admitted" to conduct business in the United States under the insurance laws of the respective states. An admitted company is usually required to deposit cash or securities with the proper state insurance officials; submit annual statements to, and allow examination of its operators by, state insurance authorities; pay taxes and fees; appoint a representative within the state legally to represent the company; and in general meet the same standards and comply with the same regulations as domestic companies. If a policy holder has a contract with a foreign non-admitted company, the laws of the United States will not apply in case of dispute. In such cases, if legal action was necessary, a policy holder would be compelled to sue in the courts of the country in which the foreign company was domiciled, and possibly himself go abroad when the claim came to trial, or at least be represented by his attorney.

The most important point, however, for the Dalbere Company to consider in reference to its marine insurance was not whether the insurance company was an American company, but whether it was a strong and reliable one, "admitted" and "licensed" to do business under the regulations of the insurance department of a state of the

United States whose insurance laws were satisfactory. Old, well-known, reliable foreign insurance companies that have long been represented in the United States and, like domestic companies, are subject to American insurance laws and regulations may, and do, give full protection and complete satisfaction. From purely commercial considerations it is immaterial whether the company is American, or British, or of some other nationality, providing it is a sound company and admitted to this market.

In view of the importance of marine insurance to the importer, and the risks that may be involved in leaving the choice of the company to the foreign shipper, the Dalbere Company's decision to require c. & f. rather than c.i.f. quotations in shipments from China and Java is as sound in principle as it appears to have been satisfactory in practice. However, both the desirability and the possibility of changing to c. & f. quotations will vary in different trades and with different foreign shippers. The custom of the trade in a particular market may make it difficult and unwise to attempt to change established practice. And where imports from reliable shippers under c.i.f. quotations have long been satisfactory, there would be little point in attempting to inaugurate a new policy.

The case states that the American insurance company's representative maintained that American bankers hesitated to grant letters of credit unless the financial standing of the foreign insurance company was satisfactory. Only in very rare instances would this be the case. In applications for letters of credit, a bank considers the credit standing of the importer, not the insurance company. In fact, upon issuing a letter of credit a bank probably would have no means of knowing what company would issue the insurance policy that covered the imports under the letter of credit. It is possible that in the case of a customer of unknown financial standing who was importing from a country with demoralized finances, a bank might well inform itself upon the detail of the insurance company's standing, at least to the extent of being assured it was an "admitted" company, qualified to do business in the United States under the provisions of our best state insurance supervision.

April, 1929

G. B. R.

CONDAR CHINA COMPANY¹

IMPORTER—CHINA AND GLASSWARE

IMPORTING—*Purchasing Exchange for Merchandise Imported from France.* A company selling china and glassware imported merchandise from several foreign countries under a variety of arrangements. Deliveries usually were made from four to six months after orders were placed. It was the company's policy to purchase exchange with which to pay for its purchases at the time of payment. In 1924, because the company made its French purchases in small quantities and at irregular intervals, and because it expected the dollar value of the franc to increase upon the adoption of the Dawes Report to the Reparation Commission, the company considered purchasing French exchange at the time of ordering or in advance at any time that the rate appeared to be favorable. The latter plan the company rejected as being purely speculative. After incurring a loss on an order as a result of buying exchange at the time it ordered merchandise, the company decided to follow its previous policy of buying exchange when payments were due.

IMPORTING—*Purchasing Exchange for Merchandise Imported from England.* A company which imported china and glassware from England among other foreign countries, received quotations on the English merchandise in terms of pounds sterling. The company decided that, since the volume of its purchases from that country, and hence the amount of exchange required, varied little from month to month, it could obtain no advantage in the cost of exchange by consistently buying exchange in advance of the time of payment for the merchandise instead of at the time of payment.

(1924)

The Condar China Company of Philadelphia had imported china and glassware for about 100 years. This company also sold domestic products. Its annual sales amounted to approximately \$1,500,000; 47% were domestic products, 30% English, 4% French, 5% German, and 14% Japanese, Chinese, Italian, or Czecho-Slovakian. Previous to the middle of 1924, the company never had purchased any exchange before the payment of invoices became due. At that time, however, because the company might have made substantial profits on exchange early in 1924 if the executives had not followed this policy, and because

¹ Fictitious name.

the management believed that the French franc, as well as the pound sterling, probably would increase in value upon the acceptance of the Dawes Report to the Reparation, Commission or the so-called Dawes Plan, the treasurer was uncertain as to the soundness of the company's policy regarding the purchase of exchange.

Forty-six per cent of the company's sales were of dinner ware; 12%, of glassware; 28%, of hotel ware; and 14%, of fancy ware. The dinner ware came largely from England, Japan, and France. The glassware was manufactured principally in the United States, although a small proportion was of French origin. The hotel ware was of domestic or English make. The fancy ware consisted of novelties from several countries; the principal sources were Japan, China, Italy, and Czecho-Slovakia. Manufacturers of glassware and crockery made products for the Condar China Company upon order only. It took from four to six months for foreign merchandise to arrive in the United States after the company had placed an order.

The Condar China Company sold 85% of its merchandise at wholesale in all parts of the United States, and 15% at retail by means of a travelling salesforce of 20 men. The company sold its merchandise at wholesale in three ways: in crates, from open stock, and by order for import. A crate of china was a case containing an assortment of a specific number of dozens of each kind of plates, of cups and saucers, and of all other articles needed for complete sets of china. If a merchant sold his supply of one type of plates and wished to replenish his stock, it was necessary for him to order from the Condar China Company's open stock. If a customer desired to order several crates of merchandise which he did not need at once, he could place an order for import. The Condar China Company then would place the order with a foreign manufacturer. Upon the arrival of the merchandise in the United States, the Condar China Company would ship the china directly from the docks to the purchaser. The average mark-up for sales from open stock was 60% of the landed cost. The company sold merchandise in crates at a discount of 10% from the open stock prices and china ordered for import at a discount of 10% from the crate prices.

The Condar China Company changed its quotations in accordance with manufacturers' prices; these changes sometimes took

place semiannually, but usually occurred annually. Manufacturers customarily notified the Condar China Company of a prospective change in price six months in advance.

The prices quoted to the Condar China Company by English manufacturers were in sterling; by French, in francs; by Japanese, in American dollars; by Czecho-Slovakian, in Czecho-Slovakian francs; by Italian, in lire; and by German, in American dollars. In Germany, the company had a forwarding agent, who paid for all German and Czecho-Slovakian purchases upon the presentation to him of the shipping documents. He also negotiated with the banks about the rates at which they would exchange American dollars for Czecho-Slovakian francs. The Condar China Company supplied this agent with funds by depositing with the New York correspondent of the agent's German bank sufficient funds to meet the payments.

In other countries the company used different methods of payment. Products from Japan were under the control of a Japanese monopoly represented by agents in New York. It was necessary for an American merchant to purchase from these agents, who received payment in American dollars 40 days after the arrival of the merchandise in the customers' warehouse. The Condar China Company made payments in Italy by lira letters of credit, drawn on an American bank in favor of the company's Italian agent and opened in the United States at the time the exporter shipped the merchandise from Italy. Purchases made in France were on open account, and payment in francs was due 30 days after the date of invoice. Since a vessel required about 10 days to reach France from the United States, the company estimated that it was necessary to make payment about 20 days after the date of invoice.

In England the company had a forwarding agent, who made and paid for all purchases from manufacturers from whom the company usually bought only small quantities of china infrequently. The company supplied its agent with £1,000 sterling and replenished this amount whenever necessary by sending additional funds to him in amounts of £1,000. The Condar China Company purchased directly, however, from those English companies from which it had obtained china in large quantities for a long time and at regular intervals, and it made payments directly to these manufacturers 30 days after date of invoice.

Since the company's expenditures in England in terms of pounds sterling averaged about the same each month, no advantage with respect to the amount spent for exchange could be obtained by the purchase of exchange in advance of the time of payment so long as the executives followed this policy consistently. It made no difference, for example, whether the exchange bought in January was to pay for purchases made from four to six months earlier, or to cover the exchange necessary for the payment of purchases made in that month to be delivered from four to six months later.

An advantage in the simultaneous purchase of exchange and merchandise was the possibility of establishing at once the purchase price of the merchandise. The executives of the Condor China Company could not establish the total ultimate cost of merchandise accurately at the time of purchase, however, because they could not determine the duty which the company would have to pay. Customs officials calculated the duty after the arrival of the merchandise in the United States; they based the duty on the rate of exchange prevailing on the day the exporter shipped the merchandise. Although sterling futures were selling at a discount early in 1924, this situation was not normal. Ordinarily, sterling futures commanded a premium of about $\frac{1}{2}$ of 1% per month. The simultaneous purchase of exchange and merchandise thus would cost the company this premium.

Payment for purchases made from France and from several other countries in small quantities and at infrequent intervals presented the situation about which the treasurer was undecided. Wide fluctuations could take place in the rate of exchange between the purchase of the merchandise and the payment for it from four to six months later. These fluctuations caused variations in the cost of merchandise to the Condor China Company.

The treasurer, therefore, reviewed three exchange purchasing policies. The first was to buy exchange and merchandise simultaneously; this plan permitted the immediate establishment of the purchase price of the merchandise, but not the total final cost. The second was for the executives to attempt to have exchange always on hand by purchasing it whenever they believed that the rate was low. For example, if the management had purchased large amounts of French francs in March, 1924, at the rate of 3.45 cents per franc, rather than on October 15 at the rate of 5.25

cents, the company would have saved a substantial amount. The treasurer deemed this policy to be one of mere speculation and believed it undesirable. The third plan, which was the management's established policy, was to purchase exchange at the time payment for the merchandise was due.

In July, 1923, the company had bought some French merchandise valued at 131,000 francs. At the time, francs had been selling at the rate of 5.12 cents. The merchandise was to have been delivered during December, 1923, but had not arrived until May, 1924. The Condar China Company had made payment for this merchandise with francs at 5.70 cents. The company would have saved about 10% of the purchase price if it had bought francs at the time it had purchased the merchandise.

Again, in the early part of 1923, the company's agent had purchased 100 crates of novelties in Czecho-Slovakia, which the company sold in the United States for \$35 per crate. The novelties proved to be popular, and the company quickly sold its 100 crates. It sold, in addition, 100 crates for import, at \$35 less 10%. About 4 months later, when the German agent of the company paid for the 100 crates, the Czecho-Slovakian franc was double the price that it had been at the time the agent had bought the merchandise, with the result that the cost per crate to the Condar China Company was about \$35.

There were distinct disadvantages, however, in advance purchase of the exchanges of the countries from which the company bought irregularly. French manufacturers of china frequently delivered the merchandise from four to six months later than the date agreed upon at the time of purchase. This situation caused inconvenience in the purchase of forward exchange. If, for example, the Condar China Company purchased francs in July to cover the cost of merchandise bought at that time for delivery in December, and if the merchandise failed to arrive on time, the company would have to request the bank to postpone the delivery date on this exchange. The banks charged a commission of $\frac{1}{4}$ of 1% for an extension of 30 days. In some instances, they would grant a second extension of 30 days for an additional $\frac{1}{4}$ of 1%. If the merchandise did not arrive at the end of this extension, the Condar China Company would have to sell the francs which it had purchased.

Duty on the company's merchandise varied from 40% to 70% of its value. Since customs officials based the duty on merchandise on the rate of exchange that had prevailed on the day the merchandise was shipped, the company's exchange purchase policy did not affect the amount of the duty. The treasurer estimated, therefore, that upon articles carrying a 70% duty, fluctuations in exchange rates between the time of purchase and the time of payment would affect only 60% of the total cost of the merchandise, namely, that part of the cost which represented the amount of the invoice.

In the latter part of July, 1924, the treasurer thought that if the Dawes Plan were accepted the dollar value of the franc would increase. Since he knew that the company would need about 50,000 francs in October and November, 1924, he purchased that amount of francs on August 19 at 5.42 cents. On October 15, francs could be purchased at 5.25 cents. The treasurer decided that the experience of the company in this instance, together with the disadvantages which it would encounter because of delays in the arrival of merchandise, justified the company's return to the former policy of purchasing exchange only when payment was due.

COMMENTARY: Since the Condar China Company received and paid for its imports several months after the orders were placed, a rise in the exchange value of the foreign currency might completely wipe out the expected merchandising profits, or even result in losses. As long as the company could not determine what the landed costs would be in dollars, every import transaction was a speculation. Speculation in exchange is not one of the functions of a merchant. As a merchandising company, it was highly desirable that the Condar China Company should, if possible, remove or lessen the risks of fluctuating exchanges with their subsequent effect on the ultimate costs of the company's imported merchandise. Otherwise, it was in constant danger of seeing legitimate merchandising profits swallowed up in exchange costs. Was it possible, in 1924, to remove the exchange risks?

Aside from the method of purchasing its foreign merchandise in dollars, which the company could follow in Germany and Japan but which would not be generally possible, there were four ways by which the Condar China Company could handle its foreign exchange. The case mentions three ways, but the first method given in the statement of the case (page 312) may be accomplished in two ways. The four methods are as follows:

- (1) Buying spot exchange when the goods are ordered;
- (2) Buying exchange for delivery at the time payment is due;
- (3) Buying exchange whenever rates seem to be especially favorable;
- (4) Buying exchange when payments are due.

The third and fourth methods did not meet the situation. They do not eliminate exchange risks. The company was right in dismissing the third method as being mere speculation. The fourth method—buying exchange when payments are due—does not remove the exchange risk, but constantly takes it. To adopt this policy, as the company did, is to assume that no method will meet the situation faced by the Condar China Company in 1924. For francs, the first and second methods were available in 1924, and could have removed, in part, the uncertainties of the landed costs of merchandise.

The first method—buying spot exchange—ordinarily gives nearly full protection against cost variations, but it is usually expensive, since it ties up a company's funds until the goods are received. It is essentially paying cash in advance, and the importer must add to his purchase price the interest on the funds thus used. If, however, future exchange is at a high premium, it may be cheaper to buy spot exchange.

The second method—buying exchange at time of placing order for delivery at time of payment—is ordinarily the method best able to give the desired protection. But there are certain necessary conditions required to make this method effective. There must, of course, be a market for the foreign currency. In the case of francs, it was always possible, even during the period of greatest fluctuation, to buy forward. Costs of future francs, however, at times reached rates 2% above spot. If costs became excessive, it was always possible to buy spot francs. In such cases, an importer could borrow from the bank funds for this purpose, if the interest charges were less than the premium on future francs. This course is frequently followed, not only when cost of future exchange is high, but also when there is no market for a foreign currency and protection is imperative.

Another necessary condition for securing protection by forward exchange is that the goods be delivered at the date agreed upon. Otherwise, the importer is left with francs in his possession that he cannot profitably dispose of or he must seek extensions by buying forward at the rates then prevailing. The Condar China Company's difficulties with its shippers in this respect were an adverse factor, and, if frequent and persistent, would prevent the company from receiving the full benefits of purchasing exchange in advance.

The Condar China Company had a further difficulty in the fact that import duties, which ranged from 40% to 70%, were payable upon

valuations determined by the rate of exchange existing on the date the goods were shipped from the foreign port, not on the date of purchase. Hence it would be impossible, even by the purchase of future exchange, to cover a large percentage of the risks in costs of the goods due to exchange fluctuations.

It would seem, nevertheless, that the purchase of forward exchange, while it would not remove all the risks in the costs of the merchandise, would lessen those risks and remove from the transaction as much of uncertainty as would be possible under the circumstances. Since resale prices of the goods must be determined far in advance of shipment, the purchase of future exchange would to a large degree eliminate the risks involved in the final cost of the merchandise as far as the invoice prices were concerned. The company had still to take the risks due to fluctuations in the amount of duties that would be required and the risks that come from delayed shipments. A plan that would remove one of these three risks would seem, however, to be preferable to the established policy of the company in purchasing exchange only when payments were due. This latter method removed none of the risks. Since, however, the length of time between date of shipment and date of payment was shorter than the length of time between date of purchase and date of shipment, the rate of exchange on date of payment might possibly be closer to the rate on date of shipment than was the rate on date of purchase. As far as this might be so, and for the amount of duties to be paid, the purchase of exchange at time of payment would involve less exchange risk than purchase of exchange at time of purchase. When duties were at the higher level, 70%, this might equalize the risk involved in the two methods.

The company's problem in 1924 during the period of post-war currency disturbances in European countries is thus seen to have been a complicated one and particularly difficult to meet. Under the uncertainties that existed, the purchase of forward exchange contracts or of spot exchange at the time of placing an order on the whole would have been safest. The company's experiences as recorded in the case indicate the futility of attempting to lessen the risks by the method of handling exchange on a speculative basis. While it is true that the conditions of deliveries and high tariffs faced by the Condor China Company lessened the effectiveness of the purchase of future exchange as a protection against high costs, the unsettled exchanges of 1924 favored the use of facilities for the purchase of future exchange by a merchandising organization whose desire it was to eliminate as far as possible the element of speculation from its transactions. Exchange risks would not be eliminated, but they apparently would be appreciably lessened.

December, 1927

G. B. R.

JOECY WOOL COMPANY¹

IMPORTER—WOOL

IMPORTING—*Use of 90-Day Drafts in Payment of Imports from Argentina.*

It was the trade practice for merchants in the United States importing wool from Argentina to make payment under 90-day letters of credit issued by the banks of the importers. Although an American company importing wool estimated that, because of the low interest rates prevalent in the United States in 1924, it could save about $\frac{9}{10}$ of 1% on shipments from Argentina by cabling funds instead of using 90-day drafts, the company decided to continue to follow trade practice. The company's decision was based on the fact that, since the prices quoted by Argentine exporters included the amounts charged the exporters by banks for discounting drafts given in payment by the importers, the company, if it asked exporters to quote prices on a cash basis, might be at a disadvantage with competitive buyers, because of the inconvenience such a request would cause exporters.

IMPORTING—*Use of Cabled Funds in Payment of Imports from Australia.*

Prices quoted by Australian wool exporters were on a cash basis, that is, the discounts charged by Australian banks for discounting drafts on the exporters' customers were not included in the quoted prices, but were added later. Because the discount rates were high, an American company importing wool found that it could save money on purchases from Australia by cabling funds in payment instead of using 90-day letters of credit, as it previously had done.

(1924)

The Joecy Wool Company imported annually from 6,000,000 to 8,000,000 pounds of wool; about one-third of it came from Argentina and two-thirds from Australia. Because of the low interest rates that were current in the United States in October, 1924, the executives discussed the advisability of financing imports from South America by cabling funds instead of by using 90-day dollar letters of credit as previously.

This company formerly had used 90-day sterling letters of credit in purchasing Australian wool, but the management had discontinued that plan. Quotations on Australian wool were in sterling, and many American importers still were using 90-day

¹ Fictitious name.

sterling letters of credit in buying this wool. Quotations to American purchasers of Australian wool included only the actual prices for the wool. The shipper added to the invoice cost of the wool the discount that the Australian bank charged him for purchasing the draft which he had drawn upon the American importer. The Joecy Wool Company had found that, because quotations were on a cash basis and because the rates of discount that Australian banks charged were high, it was profitable to cable cash to the shipper for Australian wool at the time of purchase rather than to use 90-day sterling letters of credit. The discount rate on 90-day letters of credit in the latter part of September, 1924, was $4\frac{7}{8}\%$ and the banker's commission $\frac{1}{4}$ of 1% , whereas the discount on telegraphic transfers was $2\frac{3}{4}\%$ and the banker's commission $\frac{1}{16}$ of 1% . To the cost of telegraphic transfers it was necessary to add the interest on the funds advanced.

The prices of Argentine wool quoted to American importers in the United States were in dollars. The customary trade practice was for a purchaser to import wool under a 90-day dollar letter of credit issued by the bank of the American importer in favor of an Argentine wool shipper. The price quoted included not only the actual cost of the wool, but also the discount charged by the exporter's bank for discounting the draft given in payment by the American importer.

Although the discount rates in Argentina were not so high as those in Australia, it was possible for the Joecy Wool Company to effect a saving by cabling cash rather than using 90-day letters of credit. The rates of discount quoted in Australia were not upon an annual basis as were the discount rates quoted in Argentina. For example, a discount rate of $4\frac{7}{8}\%$ for a 90-day draft in Australia meant that $4\frac{7}{8}$ pounds was deducted from a 100-pound draft. This charge in effect was the same as an annual discount rate of $19\frac{1}{2}\%$. A discount rate of $6\frac{3}{8}\%$ for a 90-day draft in Argentina meant that interest at the rate of $6\frac{3}{8}\%$ per annum for 90 days was deducted from the amount of the draft.

In the first week in October, 1924, the discount rates in Argentina were as follows:

Sight draft.....	00 %	90-day draft.....	$6\frac{3}{8}\%$
30-day draft.....	$6\frac{1}{8}$	120-day draft.....	$6\frac{1}{2}$
60-day draft.....	$6\frac{1}{4}$		

Although Argentine banks did not discount drafts drawn in Argentina which were due upon sight in the United States, it was customary for an Argentine bank, in calculating the number of pesos payable to a South American shipper for a sight draft upon the United States, to deduct about two points from the cable rate of exchange. For example, if the cable rate for pesos per American dollar was 2.15, the bank would pay the Argentine shipper at the rate of 2.13. These two points were to compensate the bank for the interest upon the funds during the time required for the draft to reach the United States from Argentina.

The commission charges of American banks for letters of credit in favor of Argentine exporters were as follows:

Sight draft..... $\frac{1}{8}$ of 1%	90-day draft..... $\frac{1}{4}$ of 1%
30-day draft..... $\frac{1}{8}$ of 1	120-day draft..... $\frac{3}{8}$ of 1
60-day draft..... $\frac{1}{6}$ of 1	

The charges for cabling funds to Argentina included the cost of the cable, which averaged about \$5, plus a commission of $\frac{1}{8}$ of 1% or a minimum of 50 cents. The Joecy Wool Company calculated that the savings to be effected by the cabling of funds or the use of a sight draft rather than a 90-day letter of credit were as follows:

90-Day Draft	Sight Draft	Cabling of Funds
Discount ($6\frac{3}{8}\%$ per annum)..... $1\frac{9}{32}\%$	Estimated Expense caused by deduction from demand rate of exchange.....1%	Cable Charge.....\$5
Bankers' Commission..... $\frac{1}{4}$ of 1%	Bankers' Commission..... $\frac{1}{8}$ of 1%	Bankers' Commission.... $\frac{1}{8}$ of 1%
Total Cost..... $1\frac{27}{32}\%$	Total..... $1\frac{1}{8}\%$	Total.....\$5 + $\frac{1}{8}$ of 1%

The saving between a 90-day letter of credit and a sight letter of credit was $2\frac{3}{32}$ of 1%. The saving between a 90-day letter of credit and the cabling of funds was about $1\frac{23}{32}\%$. This saving would result from a reduction in the selling price of the Argentine exporter equal to the discount which he would have had to take had the company made payment by a 90-day draft. Since payment by a sight draft or by the cabling of cash required

the company to provide funds about 120 days earlier than did payment by a 90-day letter of credit, it was necessary for the company to add to the cost of the first two methods of payment the interest on the funds to be advanced. The interest rates as represented by the rates on bankers' acceptances in the United States in the early part of 1924 were from $2\frac{3}{8}\%$ to $2\frac{1}{2}\%$ per annum.

The Joecy Wool Company estimated that the net saving to be gained by paying for Argentine purchases in the same manner that it paid for Australian purchases, namely, by the cabling of funds, would be about $\frac{9}{10}$ of 1%.

On the other hand, the trade custom of quoting prices which included discounts was so well established that an attempt to obtain quotations on a cash basis would cause inconvenience and confusion to shippers. The relation, furthermore, between the price which a shipper would quote when he was to receive payment under a 90-day letter of credit and the price that he would quote when he was to receive payment by cash would change each time the discount rate in Argentina changed. It was possible also that several shippers would not wish to make the calculations necessary to determine the difference between the two prices. If, for example, an Argentine shipper received one offer from a company which intended to pay by the customary method of using a 90-day draft, and another offer from the Joecy Wool Company, whose offer was less than that of its competitor by the amount of the discount that the bank would charge the shipper, the shipper probably would accept the first offer rather than make the calculations necessary to determine the accuracy of the second.

The Joecy Wool Company decided not to attempt to use a method of payment contrary to the established trade custom, but to continue to finance its Argentine wool purchases by the customary 90-day letter of credit.

COMMENTARY: The Joecy Wool Company, under the conditions which existed at the end of 1924, could have effected a small saving in the financing of its wool imports from Argentina by cabling funds instead of using the 90-day letter of credit customary in the Argentine wool trade. The company had adopted the former method in the payment of its wool imports from Australia because of the high rates of discount charged by the Australian banks on sterling drafts and the low rates of interest prevailing in the United States.

The situation in Argentina was dissimilar to that in Australia in certain respects. Drafts were drawn in dollars, not sterling. The difference in cost in favor of cabling was only slight in Argentina, but much more worth while in Australia. Apparently more important, the custom in Argentina of quoting prices which included the discount would make necessary a change in the method of price quotation if the method of financing were changed. There seems to have been undue apprehension, however, on the part of the Joecy Wool Company in this respect, for many importers have found it possible to get quotations under the proposed plan. At the present time, many importers in the United States are financing purchases in Argentina by the proposed method.

A question that might be raised is as to whether there is a risk involved in cabling funds because of the fact that the documentary control of shipment may be lessened when payments are made by funds cabled. If the funds are cabled to the importer's bank, payment will be made only on receipt of the shipping document. The foreign shipper receives cash on delivery of documents to the Argentine bank. The importer must rely upon the integrity and reliability of the shipper in Argentina that the goods shipped are as ordered. This risk obtains, however, when goods are shipped under a letter of credit. For, under a 90-day letter of credit, the bank in Argentina in discounting the exporter's draft does not examine the goods, but merely sends the draft forward for payment. But since the goods usually arrive before payment is due, the importer may examine the shipment in New York or Boston before payment. However, if the importer has his own branch house or a trusted agent in Argentina, the goods may be examined in Argentina before payment when settlement is made by cash in that country. Under these conditions there would be no greater—possibly less—risk in paying by funds cabled to the bank in the exporter's country. The Joecy Wool Company had no purchasing branch in Argentina; nevertheless, the risk that goods would not conform to order was essentially the same whichever financing method was followed.

Another objection to cabling funds comes from possible losses of interest on the funds advanced by the importer. The money advanced may not all be needed at one time for making payments on several shipments made in filling a single order, and there may be insuperable difficulties in placing the funds in short-term investments in the foreign country so that they will yield returns until needed. Part of the funds may lie idle. Under a letter of credit, the foreign shipper draws his drafts when shipments are made, payments are made by the importer as the drafts are presented when due, and there is relatively small risk that funds will be idle for any important period. If the importer is not

in a position to have the funds profitably employed in Argentina, interest losses on cabled funds may balance savings. If he has his own branch office and staff in the country, this perhaps may be more readily prevented.

Finally, the decision of the company not to cable funds for the payment of wool shipments does not seem to be well taken for the reasons stated in the case—namely, the difficulties of quoting wool prices. If material savings could be made by cabling funds to a reliable bank in Argentina—and there are many such—there were no insuperable difficulties. Many firms are following the practice. Cabling funds does not necessarily add to the risks involved as far as documents are concerned. Since interest rates are higher in Argentina than in New York, the employment of balances, if it were necessary to keep balances there, would probably not result in interest losses. The saving of $\frac{9}{10}$ of 1% would seem to be worth while, even if it did involve at first some difficulties in overcoming long established practices in price quotations by the Argentine wool dealers.

December, 1927

G. B. R.

PAGE AND SHAW, INC.

MANUFACTURER—CANDY

EXPORTING—*Selling Methods of Company Incorporating Abroad.* A company manufacturing high-grade candies depended for its sales chiefly on its own retail stores, maintained in many of the leading cities of the United States. The company decided to form an English corporation to operate a factory and three retail shops in London for the manufacture and sale of package candy. A score or more of English families were ordering candies from the company regularly by mail, but otherwise the company had no foreign sales; it knew that English people were not accustomed to candy in boxes or to retail shops selling candy exclusively. In order to insure the maintenance of the high quality of its product, certain materials were sent from the United States, as was also a staff of workers, only sales girls being recruited in England.

(1919)

Prior to 1919 Page and Shaw, Inc., which manufactured high-grade candies to retail at an average price of \$1.25 a pound, depended for sales chiefly on its own retail stores in the United States. These were maintained in many of the leading cities, including Boston, New York, Chicago, and Los Angeles. The sales volume of the larger of the stores reached \$8,000 to \$9,000 a day during the Christmas season, and averaged \$2,000 or \$3,000 daily for the year. The average for the smaller shops was less than \$1,000 daily. Rents which the company paid for the stores varied from \$3,000 to \$30,000 a year; ratios of rents to sales also varied for the stores, averaging about 7%.

In addition to selling through its own retail establishments, the company sold to independent retail candy stores, drug stores, hotels, railways, and steamship companies. Page and Shaw candies had been sold on transatlantic liners for the first time in 1918. As a result of these sales, the company had received a few mail orders from people resident in England. The number of such mail orders was increasing, and a score or more of English families were ordering candies from the company regularly. The company made no other foreign sales. Its total annual sales

amounted to about \$6,000,000; 70% of this sales volume the company secured through its own retail stores.

In 1919, one of the directors of the company proposed the formation of an English corporation with capital of £100,000 and with all stock, except a few qualifying shares, owned by Page and Shaw, Inc. The function of the corporation would be to operate a small factory and three retail stores in London for the manufacture and sale of package candy. Excellent sites were available. One was on Piccadilly in the heart of the fashionable West End shopping district, in a shop about to be vacated by a jeweler. This shop could be rented for £5,000 a year. A second location was on the Strand, a popular shopping center, in the building of the Hotel Cecil. Space could be rented here for £1,500 a year. The Hotel Cecil and the Hotel Savoy, which was near the Hotel Cecil, were favorite resorts for tourists from the United States. The third location was on High Street in Kensington, a desirable location both because it was in the neighborhood of many large department stores, and because property in that district was relatively cheap. Suitable premises for a shop and a small factory in the Kensington locality could be bought for £24,000. Retailers throughout England could be supplied from this factory.

The director proposed three stores rather than one because the various retail districts of London were distinct, shoppers in one district rarely going into another, and because it was the practice of the company in the United States to maintain several stores in large cities. The director's reason for proposing a factory in London was that the company always insisted on maintaining the uniformly high quality of its products. Although some candies manufactured in the United States could be shipped without danger, it was desirable to offer a varied line, and many of the company's choicest makes of candy could not be sent so great a distance without risk of deterioration or actual spoilage.

Further to insure the maintenance of uniformly high quality, the director proposed to send from the United States materials such as chocolate coatings, nuts, fruits, flavoring, and even the boxes in which the candy was to be packed. The transportation of these materials would increase the cost of production slightly. The company's gross margin averaged about 32% on domestic sales, and the director estimated that on the London sales the gross margin would be slightly less than 30%.

For manager of the company the director suggested an Englishman who had lived in the United States for 20 years and who had been educated in American schools. The services of this man could be secured for £1,000 a year. With the exception of sales girls, the director proposed sending to London an American staff, including candy makers. The company would have to pay American candy makers sent to England £12 or £15 a week, although English candy makers received only half as much. Wages of sales girls averaged £3 a week; about 12 sales girls would be required for the three stores. In each shop, the wages of a porter, who could also act as commissionaire, would be about £2 a week. On the basis of probable sales for the first two years, the director estimated that total expenses, including overhead expenses of the three stores and the factory salaries, would not exceed £20,000 a year. No provision for advertising was made in this estimate, as the company intended to depend solely on the distinctive appearance and decorations of its shops for advertising.

Observation indicated that the average individual in England did not consume so much candy as did the average individual in the United States. Furthermore, the English were not accustomed to ready packed boxes of candy. English middle-class buyers usually asked for sixpence worth or a shilling's worth of sweets in bulk, while even the upper-class buyers were more likely to ask for a half crown's worth than for any given quantity. The great bulk of the candy offered for sale in England was of medium quality and sold for 2/6 or 3/6 a pound. Consequently, the price of ready packed boxes of high-grade candy seemed excessive to the average Englishman. Page and Shaw candy, for example, would have to sell for 6/6 a pound.

Very few English shops sold candy exclusively; it usually was grouped with other food products. Prior to 1915 a number of small tea shops which sold bulk candy had been established in London under the name of Lyons Tea Shops. As the popularity of these shops was demonstrated, others were added, and a few of the largest, which were restaurants as well as tea shops, were called Lyons Corner Houses. The one near Piccadilly Circus was said to be the largest of its kind in the world. The Lyons Corner Houses and Tea Shops sold not only candy but cakes, biscuits, and other sweets as well.

It was apparent that a retail candy store located in an exclusive district in London and operated in the usual American manner was distinctly a novelty from the English point of view. Englishmen who were consulted predicted that an American candy store in London never could succeed. So far as the company knew, no other candy manufacturer ever had attempted to open retail stores in foreign countries.

In 1919, as the director had proposed, Page and Shaw, Inc., formed an English corporation and opened three stores and a small factory in London. Seventy per cent of the English sales were made at retail by the three shops and 30% were made directly from the English factory. Although the company sustained a loss on London sales during the first four years, the volume of sales increased steadily, and in 1923 the company made a net profit of 3% on total English sales of approximately \$450,000, as compared with a net profit of 15% on sales in the United States. In 1924, sales increased about 12% over the previous year and in 1925 there was a further growth in volume of 10%. The net profit in 1924 suffered because the company was unable, for about six months, to sublet a high-rent store in a block which it had leased. In spite of this contingency, the net profit for the year amounted to 5¼%, and in 1925 it increased to 9%.

COMMENTARY: The apparently successful establishment of the corporation to operate retail candy stores in London is, in a measure, a justification of the decision. The burden of proof is upon the executive who advocates the establishment of a factory or branch in a foreign country. In determining the advisability of such an establishment, several factors must be taken into consideration. First, the company's probable increase in sales and profits when owning factories and branches, as compared to its sales and profits when selling through agencies and making shipments from the domestic or centrally located foreign plant, should be considered. Second, consideration must be given to the suitability of a branch or factory as a decentralized base for the supply of markets outside that in which the branch or factory is located. For instance, the location of a branch in London may be justified not by the prospect of English business alone, but by the prospect of English plus Continental business. Third, the extra expense of a branch may sometimes be justified on the basis of advertising and prestige value. It is difficult, however, to measure such value, and it is, of course, a much more conservative plan to make a

favorable decision regarding branch establishments on the basis of the first factor.

As to the first factor, in this case there seems to have been only a rough estimate as to the probable increase in sales through the establishment of a factory and retail stores in London. To make such an estimate is, of course, extremely difficult; an accurate estimate is perhaps impossible. The doubtful factors in making an estimate are indicated in the statement of the case, particularly in the statement concerning the candy buying habits of the English, and the possibility of changing them to such an extent as to enable Page and Shaw to sell a satisfactory amount.

The fact that the English corporation operated at a loss during the first four years may indicate that the establishment of the plant was somewhat premature. On the other hand, it is more likely that this fact is to be explained on the ground that to change buying habits requires a considerable length of time. It is certainly not uncommon for a new enterprise to fail to make a profit during the first few years of its existence. Such a failure is peculiarly true of the concern which depends purely upon its product, the appearance of its stores, and word-of-mouth advertising to build up its goodwill. So long as quality of product and public taste do not change materially, goodwill built up slowly in that way is perhaps less perishable than goodwill built up quickly by extensive advertising.

October, 1927

H. R. T.

McMANUS COMPANY¹

WHOLESALE—ELECTRIC MOTORS

TERMS OF SALE—*Selection by Wholesaler Selling to Contractor Dealers.* When a wholesaler selling electrical supplies agreed to distribute the motors of a manufacturer, the custom of the electric motor trade required the execution of a contract to be used when sales were made by the wholesaler to contractor dealers. In determining what provisions should be included in its contract, the wholesale company considered the forms of contracts used by three competing motor manufacturing companies. Each contract differed from the others, in varying degrees, on such matters as giving notice of changes in prices and making such changes retroactive on motors in stock, disclaiming liability for delays in delivery, granting express or implied warranties, and providing for cancellation or modification of the contract.

(1918)

The McManus Company was a wholesaler selling electrical products, including electric irons, fans, and household and industrial equipment. When, in 1918, the company agreed to distribute the motors of the Tauber Electric Company,¹ it was considered necessary, in accordance with the custom of the electric motor trade, to draw up a contract to be used when sales were made by the McManus Company to contractor dealers. The company had to determine what provisions should be incorporated in the proposed contract.

A separate department, consisting of a manager and three salesmen, was established for the sale of the motors. The manager planned to go into the sales territory to supervise the salesmen and to make sales, in order to establish personal relations with customers.

Motors were to be sold to three types of customers: the contractor dealer, who resold them to customers; the manufacturer who used them to run the machinery of his factory; and the manufacturer who incorporated them in his product. There was to be an understanding between the McManus Company and the contractor dealers selected that competing products were not

¹ Fictitious name.

to be sold by the latter; this provision, however, was not to be incorporated in the contract.

The motors of the Tauber Electric Company competed directly with those of three other manufacturing companies, each of which with its branch sales organization was larger than both the Tauber Electric Company and the McManus Company. One of the competitors, the Condor Manufacturing Company,² employed 100 general salesmen to distribute its products and, in addition, 12 men who sold the type of motor manufactured by the Tauber Electric Company. Competition was keen; the prices of the three companies were identical for most types of motors. Service and quality were the principal selling arguments.

The form of contract used by the Condor Manufacturing Company was as follows:

Motor
Dealer's
Purchase
Agreement No. __

Motor Dealer's Purchase Agreement

To the Condor Manufacturing Company
(hereinafter called the Company)

(1) EXPLOITATION

We (hereinafter called Condor Motor Dealer) agree to faithfully and diligently exploit the sale of motors and motor accessories of the Company's manufacture within the territory covered by us in the regular course of our business under conditions hereinafter set forth.

(2) SCOPE

(a) The privileges and obligations of this agreement apply only to purchases of complete standard motors and accessories, 50 h.p. and below, as listed in the Motor Price Book, or given in special advices furnished by the Company from time to time, for domestic shipment and for resale within the following territory covered by us, to wit:

(b) In case special motors within the same general limits as to size are required by the Motor Dealer holding this agreement, the Company will determine, upon application for such motors, if and upon what terms they may be furnished, the provisions of this agreement applying only to the standard general purpose motors shown in price books or price lists furnished under this agreement.

² Fictitious name.

(c) It is furthermore understood that our orders under this agreement are subject to your approval and acceptance as to quantity, or other conditions not herein set forth.

(3) SUPPLY AND REPAIR PARTS

Supply and repair parts for complete machines, when ordered separately from the motor for which they are intended are not subject to the special conditions of this agreement, but are to be furnished under the usual trade terms of the Company applicable to such parts.

(4) STOCK

We agree to order and maintain at all times reasonable stocks of motors to be available for immediate delivery to customers.

(5) INSPECTION

It is agreed that any authorized representative or representatives of the Company may inspect at any time during regular business hours, motors or accessories, ordered under the terms of this agreement, that may be held in stock and unpaid for by us.

(6) TITLE AND OWNERSHIP

As between the Company and ourselves, it is understood and agreed that title to the motors and accessories purchased hereunder shall not pass from the Company until full cash payment therefor shall have been made.

The foregoing provision shall not be construed as limiting us in any way from selling motors and accessories purchased hereunder and from conveying good title to our customers. It is further understood and agreed that all material purchased hereunder shall be at our own risk from delivery on board cars at point of shipment.

(7) PRICES, QUOTATIONS AND DISCOUNTS

Changes and reductions:

(a) Prices, quotations and discounts are subject to change at any time by the Company, but in the event of such change, we shall be promptly notified. In case of reductions in prices, such reductions shall be made retroactive in so far as they affect any motors in stock unsold or uncontracted for, provided the motor or motors have not remained in stock more than 90 days and also provided that in making claim for any adjustment we present our claim within 60 days from date of change in prices, with complete details of motor serial numbers, ratings and date of invoice covering original purchase.

Discounts:

(b) We are to be allowed the special discounts to Condor Motor Dealers, as now or hereafter established by the Company to apply under this form of contract, on all motors and accessories which the said Company may now or hereafter designate as subject to purchase under the terms of this agreement.

(8) PAYMENTS

It is agreed that full payment shall be made not later than 60 days from the date of each invoice respectively. Accounts not paid within the 60-day period shall be considered delinquent.

(9) CREDIT

This agreement does not entitle us to any special credit and the Company may refuse to sell motors or accessories to us at any time under the terms of payment herein set forth; when, in its opinion, the account current, or our financial standing, does not warrant further sales upon such terms.

(10) RETURNS

After having received permission from the Company we may return within 90 days from date of invoice, transportation charges prepaid, for full credit, less the cost of reboxing, inspection, and otherwise placing in first-class salable condition, any unused standard motors or accessories purchased for stock, but under no circumstances shall any special motor or accessory be returnable.

(11) CONFIDENTIAL INFORMATION

We agree to safeguard as confidential, all Price Books, quotations or discounts, and all data either in Data Book Form, circular letter or otherwise, and not to permit their use in any way which may be detrimental to the Company. It is further agreed that all data and information furnished hereunder shall be promptly surrendered on request by the Company and that copies or memoranda of said information in any form whatsoever shall not be made or retained.

(12) CANCELLATION

(a) This agreement may be cancelled by either party by thirty (30) days' written notice.

(b) In event of cancellation, any uncompleted business originating hereunder shall be consummated on the same basis and terms as if this agreement were continuing.

Accepted_____ 192_____ Signed_____ 192_____
(This date to govern business
originating hereunder)

By_____ By Condor Manufacturing Co.

The first paragraph of the contract used by the Condor Manufacturing Company was of psychological value. The second provision specified the merchandise covered; if this were omitted, special orders would come within the scope of the contract.

The third section excluded supply and repair parts; in view of the concentration of competitive effort on service, this stipula-

tion was apparently a disadvantage to the Condor Manufacturing Company.

The provision by which the purchaser agreed to order and maintain at all times reasonable stocks of motors was too indefinite to be of much legal force. It did provide, however, a possible basis for cancelling the agreement.

Clause 5 allowed the company to inspect all motors or accessories held in stock for which payment had not been received. In the absence of this provision, the motors or accessories might be used by the contractor dealer or become damaged. It was, moreover, an aid in the enforcement of the substantive terms of the agreement.

The next section stated that the title was to remain in the company until payment had been received in cash for the merchandise ordered. This provision, which was merely a repetition of the result reached under Section 22-A of the Uniform Sales Act, did not prevent the final purchaser of the motor from gaining a clear title. Although ordinarily risk follows title, here the retention of title by the company was solely for the purpose of making the buyer fulfill his obligations. This section of the contract also provided that the contractor dealer should bear the risk of loss from the time the merchandise was placed on a car at the point of shipment.

The seventh section protected the contractor dealer against a decline in prices on motors purchased within 90 days for which no contracts had been signed. In order to protect the company, when presenting claims for adjustment, the contractor dealer was required to give complete details of motor serial numbers, ratings, and date of invoice of the original purchase.

The ninth provision stated that the agreement did not entitle the contractor dealer to special credit, and that shipments could be withheld if, in the opinion of the company, the financial standing of the purchaser did not warrant further sales. The tenor of the whole contract was that the company was to supply the contractor dealer with his requirements in motors. It might be interpreted, therefore, if this provision were not included, to mean that the company was required to deliver all merchandise requested.

Section 10 specified the conditions under which returns were to be accepted. A 90-day limit was set in order to prevent the

return of merchandise sent back merely because it had been purchased unwisely. If the contract failed to specify that the cost of reboxing the merchandise, inspecting it, and placing it in first-class salable condition was to be charged to the purchaser, he would not be likely to allow the company to make this deduction from his credit. Special motors or accessories were not returnable.

Such confidential information as price books, quotations, statements of discounts, and circular letters was supplied by the company. As this might prove valuable to competitors, it was required that such information be returned upon request and that no copies or other memoranda be made or retained.

The term of contract was not specified; either party could abrogate it on 30 days' written notice. The provision that uncompleted transactions be consummated according to the terms of the agreement disposed of one of the most troublesome questions connected with the termination of an agency and prevented any dispute.

The contract of the Ritmeyer Electrical Equipment Company,³ follows:

RITMEYER ELECTRICAL EQUIPMENT COMPANY
Motor Agency Agreement

_____ 192_____

Gentlemen:—

We propose to furnish you the following apparatus:

and in consideration of the special discounts quoted below you agree to purchase from us your requirements in such sizes and ratings as are manufactured and sold by us, subject to the following conditions:

DISCOUNTS

1. Discounts on standard apparatus listed in our current price lists are to be as follows:

Types

Discounts

PRICES, QUOTATIONS, AND DISCOUNTS

2. Prices, quotations, and discounts are subject to change at any time by the company, but in the event of such change, you shall be promptly notified.

³ Fictitious name.

TERMS AND DELIVERY

3. With satisfactory credit, the terms of payment are net cash in 30 days from date of invoice, delivery f.o.b. point of shipment.

4. In the event of your failure to fulfill any of the terms or conditions of this contract during its life, we reserve the right to cancel the same or to delay further shipments until settlement of the overdue account is satisfactorily made. We are not responsible for delays in delivery, due to delays in transit or to strikes, fires, floods, accidents, or other causes beyond our control, of apparatus covered by this contract.

GUARANTEE

5. Our apparatus will be delivered to you free from any electrical or mechanical defects. It is fully guaranteed (subject to the conditions of the next paragraph) to deliver its rated output if kept in proper condition and operated normally.

6. Should any defects develop in any of our apparatus under normal and proper use within 30 days after the apparatus has been placed into service, we will correct same at our expense, provided you notify us immediately in writing, of such defects. We are not responsible for defects resulting from improper storage prior to placing our apparatus into service.

DURATION

7. This contract (subject to the provisions of clause 3) shall be in force for a period of one year from date of acceptance, and shall continue in force thereafter, subject to cancellation in writing by either party by giving 30 days' notice.

MODIFICATIONS

8. This contract contains the entire agreement and cannot be modified by verbal representations.

ACCEPTANCE

The undersigned hereby accepts the above agreement and assents to all its terms and conditions.

Ritmeyer Electrical Equipment Co.
Per _____

Approved:

_____, 192

(Purchaser signs here)

(Title)

(Title)

This form of contract contained several clauses which differed fundamentally from those in the contract of the Condor Manufacturing Company. The introduction constituted a virtual exclusive buying agreement. The company, apparently, thought it advisable to put this in writing, in spite of the possibility that it might be construed to be contrary to Section 3 of the Clayton Act.

The discounts offered were listed; these were followed by a clause relative to subsequent changes. It was pointed out that this practice was more satisfactory than was the one followed by the Condor Manufacturing Company, which in its contract provided that motors be sold at prices to be fixed by the manufacturer. Such an agreement might be held illusory and, therefore, not a contract.

The clause relating to credit terms did not differ greatly from the one in the contract of the Condor Manufacturing Company. In each instance indefinite statements were used, and the manufacturer was made the sole judge of satisfactory credit terms.

The fourth clause of the contract was important because it furnished contractual aid in enforcement and gave the company the power of cancellation or suspension on any breach of contract by the other party. It also provided protection, to a limited extent, against liability for delays in delivery due to causes beyond the control of the company.

In clauses 5 and 6 the company warranted its apparatus to be free from any electrical or mechanical defects. This provision undoubtedly constituted a sales argument and did not render the company more liable to rectify defects in apparatus than was the Condor Manufacturing Company, which might be held responsible under implied warranties, as stated in Section 14 of the Sales Act.

The contract of the Ritmeyer Electrical Equipment Company could not be cancelled within a year and thereafter only on 30 days' notice; according to Clause 8, it could not be modified by verbal representations.

The contract used by the Blaine Electric Company,⁴ the third competitor of the Tauber Electric Company, was as follows:

⁴ Fictitious name.

HARVARD BUSINESS REPORTS

THE BLAINE ELECTRIC COMPANY
Contractor Dealer AgreementDated at _____
The _____ day of _____ 192 _____

(1) This Agreement between Blaine Electric Company (hereinafter called Company)
and _____

(hereinafter called Purchaser) is made to enable Purchaser to order its requirements of Fractional Horsepower Motors and Motor Parts consisting of fields, armatures, brush holders and brushes (hereinafter called Motors and Parts) of the Company's manufacture from time to time and to enable Company to arrange its manufacturing schedules and facilities to meet Purchaser's requirements.

(2) Company will, subject to prices, terms and conditions hereinafter set forth, ship upon receipt of Purchaser's orders and deliver F.O.B. point of manufacture, Motors and Parts to fill such orders and Purchaser agrees to receive and pay for such Motors and Parts.

(3) To enable Company to arrange its manufacturing program for Motors and Parts to meet Purchaser's requirements during the life of this Agreement, Purchaser agrees to furnish Company, upon signing this Agreement, with an approximate monthly schedule of Purchaser's requirements of such Motors and Parts for the first six months of this Agreement and similar estimated schedules for the six months' period immediately succeeding, furnishing such estimates at least thirty (30) days in advance of the beginning of each of such six months' periods.

(4) Upon signing this Agreement, Purchaser places an initial order No. _____ for Motors and Parts.

(5) The terms of payment shall be such as are extended to Purchaser from time to time.

(6) This Agreement does not entitle Purchaser to any special credit and Company may refuse to sell and ship Motors and Parts hereunder, should Purchaser's financial condition be unsatisfactory.

(7) When Motors and Parts are purchased in connection with other apparatus not covered by this Agreement, the price of such other apparatus is not to be included in determining the amount on which Purchaser is entitled to any discounts hereunder.

(8) Company shall not be held responsible or liable for any loss, damage, detention, or delay caused by fire, strike, civil or military authority, or by insurrection or riots, or by any other cause which is unavoidable or beyond its reasonable control, or in any event for consequential damages. Receipt of the apparatus by Purchaser upon its delivery shall constitute a waiver of all claims for loss or damage due to delay.

(9) The most popular types and ratings of Motors listed by Company are shown upon Company's quantity price sheet attached hereto which may be revised from time to time.

(10) Prices of Motors and Parts purchased hereunder are subject to change at any time by the Company. In the event Company makes any reduction or increase in Motor and Parts prices, such changed prices shall, immediately upon issuance thereof by Company, become the prices applying to future purchases of Motors and Parts hereunder.

(11) Title to any Motors and Parts purchased under this Agreement shall not pass from Company until full payment therefor shall have been made in cash. Purchaser agrees to do all reasonable acts to perfect and maintain retention of title in the Company. Purchaser will, while any part of the purchase price of Motors and Parts shipped hereunder remains unpaid, maintain in the name of Company sufficient insurance to fully reimburse Company in case of loss or damage by fire or water.

(12) In lieu of all implied warranties, Company agrees to correct and shall have the right to correct by repair or replacement at its own expense, any defects in said Motors and Parts which may develop under normal and proper use within one (1) year from the date of shipment thereof, provided Purchaser gives Company immediate written notice of such defects and the correction of such defects by repair or replacement by Company shall constitute the fulfillment of all its obligations to Purchaser hereunder. All transportation charges are to be paid by Purchaser.

(13) After the expiration of the twelve (12) month period referred to in paragraph 14 and of any twelve (12) month period thereafter, during which this Agreement is in force, Purchaser will receive from Company, credit memorandum for quantity discount based upon the aggregate amount of bills rendered upon all Motors and Parts purchased hereunder.

\$5,000 and under \$10,000—1%	on \$5,000 + 2%	on amt. over \$5,000
\$10,000 and under \$20,000—1½%	on \$10,000 + 2½%	on amt. over \$10,000
\$20,000 and under \$30,000—2%	on \$20,000 + 3½%	on amt. over \$20,000
\$30,000 and under \$50,000—2½%	on \$30,000 + 3¾%	on amt. over \$30,000
\$50,000 and under \$100,000—3%	on \$50,000 + 4%	on amt. over \$50,000
\$100,000 and under \$150,000—3½%	on \$100,000 + 5%	on amt. over \$100,000
\$150,000 and under \$200,000—4%	on \$150,000 + 6%	on amt. over \$150,000
\$200,000 and under \$300,000—4½%	on \$200,000 + 6%	on amt. over \$200,000
\$300,000 and under \$400,000—5%	on \$300,000 + 7%	on amt. over \$300,000
\$400,000 and under \$500,000—5½%	on \$400,000 + 8%	on amt. over 400,000
\$500,000 or more—6%		

(14) This Agreement must be approved at the home office by an Executive Officer of Company or the Manager of its _____ District Office in order to make it binding upon Company and shall become effective immediately upon approval by Company and will cover a period of one (1) year from the first day of the month in which it was signed by Purchaser and thereafter shall continue to be operative for additional twelve (12) month periods unless discontinued by either party giving the other party sixty (60) days written notice of the intended cancellation prior to the expiration of any one of the twelve (12) month periods.

(15) All previous communications between the parties hereto, either verbal or written, with reference to subject matter of this Agreement are hereby abrogated and no modification of this Agreement shall be binding upon the parties hereto or either of them unless this modification shall be in writing duly accepted by Purchaser and approved by Company in the manner above indicated.

Blaine Electric Company

By _____

ACCEPTANCE

The foregoing proposal is hereby accepted at the prices and upon the terms and conditions named herein.

Date _____ 192 _____

Witness _____

(Purchaser signs here)

Witness _____

(Title)

Approved: _____ 192 _____

Blaine Electric Company

Witness _____

By _____
(Acting Vice Pres. or Dist. Mgr.)

From a legal and manufacturing point of view, the contract of the Blaine Electric Company was probably the most complete of the three. It differed from the other two in that spare parts of motors were included. An initial order was required at the time the contract was signed, as stated in Clause 4; and, according to Clause 3, estimates were required as an aid in the arrangement of the company's manufacturing program.

As in the other two contracts, the clauses relative to prices, terms, and credit were illusory.

The contract was similar to that of the Ritmeyer Electrical Equipment Company in regard to protection against liability for delays due to causes beyond the company's control. In addition, the Blaine Electric Company, by Clause 8, protected itself against consequential damage.⁵ If, for example, one of the company's motors blew up in such a manner that parts of the motor pierced the walls of the building where it was installed, or an attendant was killed, the company could maintain that so far as this was legally possible, it had contracted away its liability for damages. The eighth clause stated also that receipt of the apparatus by the contractor dealer upon its delivery constituted a waiver of all claims for loss or damage caused by delay. This provision was important, since otherwise a contractor dealer might accept a shipment and attempt to secure a subsequent adjustment.

Clause 10 stated that no notice of change in prices of motors need be given; it contained no provision that the new prices were to become retroactive on motors in stock. The distributor, therefore, had to bear the burden of declining prices and his salesmen could not quote an absolute price without immediate confirmation by the home office.

This contract, like that of the Condor Manufacturing Company, specified that the title was to remain with the manufacturer until full payment had been made in cash. The Blaine Electric Company, in addition, protected itself against loss from causes beyond its control, through the requirement that the contractor dealer purchase insurance against fire and flood.

Clause 12 excluded all implied warranties, eliminated consequential damages for defects, and excluded the possibility of the return of motors for breach of warranty. These provisions were in direct contrast to the Ritmeyer Electrical Equipment Company's contract, which gave express warranties, but limited the implied warranties, and also to the contract of the Condor Manufacturing Company, which did not refer to this point and, therefore, was liable for implied warranties under Sections 14 and 15 of the Sales Act. If a motor of the Blaine Electric Company broke down in service, the company had the right to rectify by repair or replacement any defects which had developed under normal and proper use, and was not liable for a breach of warranty.

⁵ See leading case, *Hadley v. Baxendale*, 9 Exch. 341.

Clause 13 outlined the quantity discount plan in detail. Clause 14 provided that the contract should be self renewing from year to year except when 60 days' written notice of intended cancellation was given prior to the expiration of any one of the 12-month periods.

The contract of the Blaine Electric Company was similar to that of the Ritmeyer Electrical Equipment Company in that verbal amplification of the terms was forbidden, but the former, in addition, abrogated all verbal and written understandings that had preceded the signing of the contract. The legal value of the latter provision might be questioned, since it apparently took away from the purchaser his right to complain of fraud. If, for example, a salesman of the Blaine Electric Company made untrue statements in regard to the technical features of the motors, according to the terms of the contract the contractor dealer would be unable to complain of fraud when he discovered that the technical features were not as represented.

COMMENTARY: The so-called agency agreements described here are, of course, agreements for the purpose of transferring the title to independent dealers, and not agreements for the creation of agents in the technical legal sense.⁶ The law distinguishes rather sharply between the independent dealer and the agent. Where the former is used, the control of the wholesaler or manufacturer is limited—and so are his risks and responsibilities. There is a strong tendency in business to seek to control the activities of the distributor, even at the expense of assumption of risk and responsibilities. In extreme cases, this tendency leads to the creation of true agency. In such cases as those before us, however, it leads only to the elaboration of the sales contract. The distributor is expected to give the customers adequate service, to carry sufficient supplies, to safeguard the goodwill and other interests of the wholesaler or manufacturer, and to adhere to the latter's general policies. Such phases of control as price maintenance, the exclusion of competitive goods, and full-line forcing are in the present state of the law considered dangerous, or at least of questionable validity. Accordingly, they are left to general understandings between the parties.

The contracts in this case concentrated on certain other features of control. They devoted a good deal of attention to the defining of the risks and the responsibilities of the wholesaler or manufacturer,

⁶ Cf. Nathan Isaacs, "On Agents and 'Agencies,'" *Harvard Business Review*, Vol. III, No. 3, p. 265.

such as the limitation of the warranties to the distributor, the sharing of the risk of nonsale, and the like. The several contracts examined differ principally in the degree of approximation to true agency which all of them simulate but which they nevertheless avoid. Some of the clauses get so near to the conception of agency that it is not at all impossible that a court would hold that the distributor had the power to bind the wholesaler in a contract with a customer. This suggestion is particularly applicable to the warranties of the case. It is also relevant to the wording of the conditional sales agreement between the manufacturer and the distributor, for this must make provision whereby the distributor from whom title has been withheld can, nevertheless, pass a good title to his customer. As an alternative proposition to such contracts as those compared here, the executive must consider the true consignment agreement, in which the consignee-distributor is in all respects the agent of the wholesaler or manufacturer.

May, 1927

N. I

BOLSTAD COMPANY¹

RETAILER—AUTOMOBILES

TERMS OF SALE—*Installment Sales of Automobiles.* Prior to 1923 a company holding the agency for a medium-price automobile had not sold automobiles on an installment basis, since the president of the company believed that sales should not be made to persons whose financial position necessitated this method of purchase. In 1923, however, because of keen competition, the company decided to sell automobiles on the installment plan.

INSTALLMENT SALES—*Selection of Type of Security for.* When a company holding the agency for a medium-price automobile decided to sell the automobiles on the installment plan, the question arose as to the type of security to be used. The company's attorney reported that either a chattel mortgage or a conditional sale contract, similar to a lease, might be used. Whichever method was adopted, the company intended to investigate carefully the financial responsibility of each purchaser.

(1923)

The Bolstad Company, located in a Massachusetts city, held the agency for a medium-price automobile of good reputation. Prior to 1923 the company had not sold automobiles on an installment basis. In installment sales 25% to 30% of the value of the car was paid at the time of purchase and the balance in 12 monthly payments. The president of the company was of the opinion that an automobile should not be sold to anyone whose financial position required that it be purchased by monthly payments. In 1923, however, competition made installment sales seem necessary. It was estimated that in 1922 \$7,000,000,000 worth of automobiles were sold in the United States, and that of the total number sold, 70% were purchased on the installment plan. After the Bolstad Company had decided to sell automobiles on an installment basis, the problem arose as to what type of security should be used.

In discussing the problem with the company attorney, the president learned that either a chattel mortgage or a conditional sale contract, similar to a lease, might be used. When an auto-

¹ Fictitious name.

mobile was sold by means of a chattel mortgage, the vendee, who possessed title to the car, transferred the title or a lien by way of security to the original vendor. In case of default, the holder of a note and mortgage was entitled to one of two remedies: to foreclose the mortgage, or to sue for the debt. The doctrine of election of remedies, frequently invoked in cases of conditional sales, had not been applied to cases of chattel mortgages. If the company should decide to sue for the debt and discover that the amount due could not be recovered, it was not precluded from suing for the car.²

Under a chattel mortgage, the purchaser could not encumber the car with contractual liens that prevailed against the Bolstad Company. In order to obtain the maximum security from a chattel mortgage, however, it was necessary to record the instrument. If the mortgage was not recorded, a person who purchased, for value, a car mortgaged to the Bolstad Company, without notice of the mortgage, prevailed against the company. Even if the purchaser had had notice, the success of the Bolstad Company in a suit would be uncertain. The outcome of such a suit depended upon the interpretation of the recording act in question. It was probable that in Massachusetts, however, the recording of the instrument would be constructive notice to any third party who might purchase the car. If a mortgagor were forced into bankruptcy, failure to record the mortgage would make the lien of the Bolstad Company ineffective as against the trustee of the bankrupt. The expense of recording a mortgage in Massachusetts was \$2. It was possible that some purchasers might object to signing a mortgage.

In the case of a conditional sale, the purchaser was given immediate possession, but title to the car remained in the Bolstad Company until the final payment. The buyer, however, if he was not in default, might assign or mortgage his interest in the car, in the absence of a contract provision to the contrary. Unless such a provision was embodied in the contract, the property might come into the possession of a person less trustworthy than the original purchaser. Under such a provision, if a partially paid for car should be sold to a purchaser for value, without notice

² It had been held in some cases, however, that a mortgagee might waive his claim by attaching the property in a suit to recover the debt; such attachment, in itself, was considered a waiver of the claim under the mortgage. See *Evans v. Warren*, 122 Mass. 303 (1877).

of the Bolstad Company's interest, the Bolstad Company could reclaim the car by the proper legal procedure. In case of default, if the car were in possession of the original purchaser, the Bolstad Company could sue either for the debt or for the car. The choice between the two had to be made judiciously because the election of one method precluded a subsequent resort to the other.³

A conditional sale agreement assured relative safety to the seller in cases of bankruptcy. If a purchaser who had defaulted became bankrupt, the Bolstad Company could retake the car within four months of the filing of the petition and retain it as against the trustee of the bankrupt.

Whichever method was adopted, the company intended to investigate carefully the financial responsibility of each purchaser.

The best of the notes obtained by the Bolstad Company with either a chattel mortgage or a conditional sale contract might be discounted at the bank or pledged as collateral for the company's own note. In the latter case, the Bolstad Company was responsible for the collection of the notes pledged. In any event, the company was secondarily liable in case of default by the maker of the note.

COMMENTARY: The several types of real security, that is, security through a hold given to a creditor on a thing, that have been applied in installment sales may be roughly classified as possessory holds and titular holds. The former interfere necessarily with the use of the thing by the purchaser.

Naturally, in the case of an automobile, where the buyer wishes to drive while he pays, the various types of titular holds have ordinarily been resorted to. These include the chattel mortgage, the conditional sale, the bailment lease, and various modifications of them. In such cases, most states have found it desirable to protect the *bona fide* purchaser who buys from the original purchaser against the secret lien of the original seller. Accordingly, recording laws or other devices for public notice have been devised in most transactions as part of the process of perfecting the titular hold in such cases. These schemes differ so widely and bear so unevenly on the several devices in any one jurisdiction that a study of the provisions of the law of each state in connection with the characteristics of the articles sold becomes necessary in making a choice of security devices. Some of the considerations of the laws of one state have been set out in the case before us.

³ *Firsch v. Wells*, 200 Mass. 429 (1909), 86 N.E. 775, 23 L.R.A. (N.S.) 144.

The inadequacy of any set of provisions for public notice is well illustrated in connection with the commodity here considered—the automobile. It is so easily removed from county to county and from state to state that the public notice recorded in any one state is likely to be unavailable for the guidance of the prospective purchaser. Accordingly, several auxiliary laws have developed to make effective this system of recording. Such are the requirements as to engine numbers and other identification marks that may not be removed from automobiles and, in some states, rigid rules in connection with the purchase of second-hand automobiles and the multiplication of details in the registration of ownership of cars with the state. The inadequacy of all these devices to meet the increasingly complicated situation, however, has led to a demand for a national registration system for automobiles, on the one hand, and to a practical revival of the anarchic condition of *caveat emptor* in automobile transactions, on the other.

April, 1927

N. I.

AUTOMOBILE FINANCE CORPORATION¹

FINANCE COMPANY—AUTOMOBILES

INSTALLMENT SALES—*Selection of Type of Security for.* An automobile finance corporation, established in Massachusetts to finance the purchases and installment sales of retail automobile dealers, considered the form of security to be selected. A study was made of the comparative merits of the trust receipt, the warehouse receipt, the chattel mortgage, and the conditional sale contract, each of which was in use by finance companies and one of which the company expected to adopt.

(1922)

The Automobile Finance Corporation was established in Boston, early in 1922, to finance the purchases and installment sales of automobile dealers. One of its problems was the selection of the type of security to use in the financing of dealers' purchases.

There were several steps in the financing of the automotive industry. The manufacturer borrowed from a bank on an open line of credit for the purchase of raw materials, the payment of wages, and other production expenses. When the finished product was shipped, the manufacturer drew a sight draft on the dealer and discounted it, with bills of lading attached, at the manufacturer's bank. This bank notified its correspondent bank in the dealer's city that it possessed such a draft and forwarded the draft with the bills of lading. The correspondent bank then informed the dealer that he could secure the bills of lading by payment of the draft. In order to meet the sight draft, the dealer borrowed from this bank, with the automobile as collateral, or arranged with a finance corporation to make payment.

In 1922, 70% of the automobile sales to consumers were being made upon a time basis. The capital of the dealer often was insufficient to finance, unaided, the installment sales. The notes given by consumers, with liens on the automobiles as security, were sold to a bank or finance company. If they were sold to a finance company, it discounted them at a bank. The bank in this instance had the indorsement of the finance company as additional security.

¹ Fictitious name.

Approximately 60% of the automobiles manufactured during the year were sold to the ultimate consumer during the three months of February, March, and April. In order to be able to supply the demand promptly in the spring and to enable the manufacturer to produce regularly, the dealer was compelled to accumulate a large inventory during the late fall and early winter.

There were four possible forms of security for financing dealers' purchases: the trust receipt, the warehouse receipt, the chattel mortgage, and the conditional sales contract. The Automobile Finance Corporation learned that each of these methods was then in use. It appeared, however, that the choice of method made by the finance companies usually had been based upon the past experience of their officers in other lines of business, rather than upon a study of the value of each method as security for the financing of automobile dealers' purchases. The Automobile Finance Corporation decided to investigate the procedure involved and the degree of security given by the use of each method.

If a dealer was unable to finance an automobile shipment from his own capital, he went to the automobile finance company with which he had established relations and notified it of the value of the shipment. The finance company drew a check payable to the bank holding the manufacturer's sight draft and the bills of lading, for from 80% to 100% of the face value of the draft; the dealer supplied any funds required to pay the balance. Unless the dealer was an old customer, the finance company sent its own clerk to the bank to pay the draft and to obtain the bills of lading for the shipment.

Up to this point, the finance company, through the bills of lading, had possession of and title to the automobiles. One method for the dealer to obtain possession was to execute a trust receipt, in which he promised to hold the automobiles in trust for the finance company, with permission to resell, provided the identical proceeds from such sales, to the amount of the trust receipt, were given to the finance company. The dealer then paid the freight charges and war tax and placed the machines on his sales floor.

This method of financing was an extension of the trust receipt as used in foreign trade for domestic transactions. The security of the finance company lay in the fact that it had title to the car and could obtain possession at any time. If the dealer went into

bankruptcy, for instance, the finance company could claim the automobiles covered by the trust receipt from the trustee in bankruptcy.² If the dealer sold an automobile covered by a trust receipt without giving the proceeds to the finance company, however, the company could not claim the automobile from the purchaser. Although the finance company expressly reserved title to the automobile, the fact that permission to resell had been given and that the machine was on the dealer's sales floor, apparently the property of the dealer, negated this provision. The buyer of the car, therefore, was a bona fide purchaser without notice and secured a valid title.

If the finance company could trace the identical proceeds of an automobile wrongfully sold, the company legally could claim such funds, even if they had been pledged to another creditor. The company could claim from the bank account of the dealer the sum placed there from the sale of an automobile for which the finance company held the trust receipt.³ If funds were not adequate to meet the claims of all holders of trust receipts, the proceeds from the sale of whose property were in the bank, the tendency of the courts was to grant an equal division of the funds available.

On investigation, the officers of the Automobile Finance Corporation learned that a securities corporation had discontinued financing machines on the sales floors of dealers, because of the difficulty of insuring that the dealers did not convert the automobiles to their own use and withhold payment. Such action by dealers had occurred in spite of the use of "checkers," who had visited periodically the customers of the company and had compared the numbers of the cars actually on the sales floor with the numbers of the automobiles for which the finance company held trust receipts. Another securities company, however, had had no difficulty from this source. It was possible to bond the dealer against conversion. Bonding was an absolute protection against loss from conversion and involved comparatively little expense. Banks did not make loans on automobiles on a dealer's sales floor, because they were of the opinion that if a dealer did not have sufficient capital to finance his inventory, he was not a good credit risk.

² *In Re Recheimer* (C. C. A. 1915) 221 Fed. 16, 22, 23.

³ *In Re Mulligan* (D. C. 1902) 116 Fed. 715, 717.

It had been said that in order to obtain the full benefits of a trust receipt, it should be used only when the title to the property was given to the holder of the trust receipt by a third party, not by the trustee. Otherwise, it possessed no more security than an unrecorded chattel mortgage or private agreement.⁴

When warehouse receipts were used in place of trust receipts, the shipment of automobiles was taken to a bonded warehouse instead of being placed on the dealer's floor for sale. Warehouse receipts were issued for each machine in the name of the finance company. The company did not give the dealer possession until he had paid the amount of the note for which the warehouse receipt was collateral. In this way, the finance company was protected fully against loss through the failure of the dealer to fulfill his obligations. The tendency among finance companies which used the warehouse receipt had been toward the non-negotiable type. Non-negotiable warehouse receipts obviated the necessity of filing a bond for twice the value of the automobiles, if the finance company should wish to remove them when the warehouse receipt had been lost. A non-negotiable warehouse receipt also gave greater security against third parties than did the negotiable form. If, for instance, the finance company gave a dealer a negotiable warehouse receipt under a trust receipt and the dealer sold, pledged, or mortgaged the warehouse receipt, the finance company could not repossess the warehouse receipt.

Under a chattel mortgage arrangement, the finance company lent the dealer the funds with which to pay the draft held by the bank and took a chattel mortgage as security for the automobile placed on the dealer's sales floor. A mortgage afforded the greatest amount of security, but required detailed arrangements. To be made effective, a mortgage had to be recorded. This process involved not only an expense of \$2, but the time necessary for recording the mortgage when it was executed and for extinguishing it when the loan was liquidated. It was possible that even a recorded chattel mortgage might not be enforceable against a bona fide purchaser because of the permission given by the mortgagee to resell. Some dealers also might object to the use of the chattel mortgage, because of the possibility that recording a chattel loan might injure their credit. It was the opinion of one finance company which used the chattel mortgage as security that

⁴ 22 Col. L. Rev. 395.

the psychological effect of having a dealer sign such an instrument was to lessen the probability that he would convert the automobile to his own use.

Under a conditional sales arrangement, the finance company secured title to the automobiles as described above and resold the machines to the dealer with a conditional sales contract as security. The contract provided that the title to the automobile did not pass to the dealer until the wholesale price had been paid. Such a provision, however, was not effective against an innocent purchaser from the conditional vendee who relied upon the ordinary course of business between the parties as a basis for implied authorization of the conditional vendee to transfer the title of the conditional vendor.⁵

The Automobile Finance Corporation had to decide which of the four types of security to use in financing automobile dealers' purchases.

COMMENTARY: The problem presented is the choice of a legal device for a business-need not adequately taken care of by any one of the traditional devices. The rapid growth of the automobile industry and the vast amount of capital required for it have led to a shifting of the burden of financing from the manufacturers to dealers and to the necessity of financing the dealers, in part at least, by means of new plans. Few dealers have been in a position to ask for the necessary funds from banks on open or purely personal credit, even when supplemented by additional personal security, such as the indorsement of negotiable paper by officers of the dealer-corporation, and the like. The obvious security was the real security furnished by the automobiles themselves. Real security (that is, security dependent on access to a thing) is effected either by giving the creditor possession or by giving him a title-hold (or at least some peculiar control over the handling of the thing). In any event, the ultimate hope of the creditor must be based on a sale of the goods—in the case of automobiles, quite an art in itself, and too burdensome and specialized for a bank to undertake. The development of special automobile financing organizations, either as outlets for banks or as auxiliaries to the manufacturing of automobiles, has been quite natural.

Arrangements for the free possession and handling of the automobile by the dealer, coupled with a title-hold by the company financing the purchase, while affording the least interference with the ordinary course of business, involve the greatest amount of legal machinery;

⁵ *Guaranty Securities Corporation v. Eastern S. S. Co.*, (1922) 241 Mass. 120, 134 N. E. 364.

and some of it is not pleasant or even safe machinery. Thus chattel mortgages and conditional sales are ill-adapted to the needs of dealer-borrowers because their use carries with them a publicity feature (developed by the law to protect innocent purchasers for value⁶) and a reflection upon one's credit standing that is shunned by the man in business. Furthermore, so far as they are reshaped in order to permit the resale of the goods to the public, they defeat their own ends. A title-hold that makes the dealer legally the agent of the lender avoids some of these difficulties. Thus there has developed the so-called trust receipt, which resembles in most instances a consignment arrangement, in which the dealer becomes responsible to the creditor for an accounting on each item sold. The plan involves careful balancing in order to avoid even partially some awkward results of thus making the lender virtually the one who sells the goods to the consumer. Thus the lender may find himself a warrantor and the bearer of other responsibilities and risks that he had no intention of assuming. These disadvantages are less serious in the case of a corporation that specializes in automobile financing than in the case of a more general banking institution. In all of these instances of title security, a considerable degree of watchfulness is required to protect the creditor from an unscrupulous dealer.

Possessory credit devices (here represented by the warehouse receipt) have the great disadvantage of interfering with the normal activities of commerce. The dealer must get his releases and move his cars from day to day as he needs them. While the machines are stored in a warehouse in the name of the creditor, the dealer has little opportunity to get access to them for the purpose of putting them into shape for delivery, inspection, and the like. On the other hand, the degree of safety to the creditor is high and the publicity feature is avoided, as possessory credit devices generally do not require recording, registering, advertising, or any other type of public notice.

Perhaps the solution of the problem before us is in a combination of the possessory and the titular devices—the former for the bulk of the goods and the latter, perhaps in some form of the trust receipt, for a reasonable portion of the goods at a time as these are released in lots from the warehouses

October, 1925

N. I.

⁶ As to conditional sales, in the absence of a statute requiring recording or filing, it is generally held that no such procedure is necessary (35 Cyc. 682). Many states, however, now require such a record as a prerequisite for validity against third persons claiming under the buyer as purchasers or creditors (*Ib.*, note 15; Uniform Conditional Sales Act, Section 5, *et seq.*, adopted in Arizona, Delaware, New Jersey, New York, Pennsylvania, South Dakota, West Virginia, Wisconsin, and Alaska). The Massachusetts statute requires the recording of chattel mortgages but not of conditional sales.

HINKEL-KRAUSS COMPANY¹

MANUFACTURER—CUTLERY

MERCHANDISING—*Misrepresentation as to Place of Origin of Product.* A company manufacturing cutlery purchased a small quantity of razors, which, although of domestic manufacture, were stamped with the word "Sheffield;" the purchasing company assumed them to have been manufactured in Sheffield, England. The word "Sheffield," when used in connection with cutlery, was generally understood, by both the trade and the consuming public, to indicate that the cutlery had been made in Sheffield, England, and that it was of high quality. Upon closing out this purchase, the company discontinued the sale of such merchandise.

(1919)

The Hinkel-Krauss Company was an Ohio corporation located at Halloran.¹ It manufactured and sold shears, manicure sets, razors, and other types of cutlery. Prior to May 1, 1919, when the company was organized, the Hinkel Company and the Krauss Company had been operating as separate companies competing in the same line of business.

When the Hinkel-Krauss Company was organized, it purchased from the Krauss Company a small quantity of razors which the latter had in stock. Although these razors were of domestic manufacture, the word "Sheffield," without any other marks, was stamped on them. The organizers of the Hinkel-Krauss Company assumed and believed that these razors had been manufactured in Sheffield, England, and that they had been imported by the Krauss Company.

That razors of high quality had been manufactured in Sheffield, England, in large quantities for a long period of time, was well known to the cutlery trade and to the buying public. The word "Sheffield," when used in connection with cutlery, had come to be understood by the trade and the purchasing public in the United States as indicating that such cutlery had been made in Sheffield, England, and was of good quality.

These razors were closed out in job lots by the Hinkel-Krauss Company within one year after its organization, and thereafter no similar sales were made by it.²

¹ Fictitious name.

² For commentary, see page 357.

HIGHGATE & COMPANY¹

BROKER—SALT

SALES PROMOTION—*Misrepresentation as to Place of Origin of Product.* A company engaged in general merchandise brokerage purchased and sold at wholesale ground rock salt imported from Germany. Salt produced in the United States had come to be preferred, by the trade and the consuming public, to salt imported from Germany. Moreover, it was generally understood that salt which was not otherwise designated had been manufactured in the United States. The company, however, did not disclose the fact that its salt had been obtained from Germany, and its manner of labeling the product led people to believe that the salt was of domestic manufacture.

SALES PROMOTION—*Misrepresentation as to Quality of Product.* A company engaged in general merchandise brokerage purchased and sold at wholesale ground rock salt imported from Germany. The company did not disclose the place of origin of the salt, but, through its salesmen and circulars, described the product in terms which implied that the salt had been manufactured in the United States by the evaporation process, whereas actually this salt was inferior in quality to salt manufactured in the United States by that process.

H. L. Highgate was an individual engaged in the business of general merchandise brokerage, under the corporate name of Highgate & Company, in Welland,¹ Virginia. Highgate & Company purchased and sold at wholesale ground rock salt imported from Germany.

Highgate & Company, through its salesmen and circulars, represented its ground rock salt as "No. 1 Star Brand Common Fine Salt" and sold it at 2 cents per 100 pounds under the market price. Other terms used to describe this salt were "common fine," "fine," and "highest grade of salt obtainable."

The ground salt sold by Highgate & Company was not manufactured or produced by the evaporation process and was inferior in quality to salt manufactured by that process in various plants in the United States. Highgate & Company did not disclose the fact that it was obtaining its salt from Germany.

¹ Fictitious name.

Salt manufactured and produced in the United States had for a number of years come to be preferred by the trade and the consuming public to salt imported from Germany. Furthermore, a substantial part of the trade and of the consuming public had come to believe that salt which was not marked or represented as having been imported from a foreign country was salt manufactured or produced in the United States. The manner in which Highgate & Company's products were labeled led people to believe that these products were of domestic manufacture.

A large number of manufacturers who labeled their salt "common fine salt," "common fine," "fine," and "No. 1 fine salt" manufactured and produced their salt in the United States by the evaporation process. Others who did not employ such methods or who did not manufacture their salt in the United States did not use such terms. Furthermore, a number of importers of German rock salt disclosed this fact to the purchasing public.²

² For commentary, see page 357.

ROCHESTER CLOTHING COMPANY

MANUFACTURER—CLOTHING

SALES PROMOTION—*Misrepresentation as to Place of Origin of Product.* Since 1895, the Rochester Clothing Exchange, of Rochester, New York, in cooperation with the Chamber of Commerce of that city, had advertised and fostered the reputation of Rochester for the manufacture of high-grade clothing. As a result, the name "Rochester," when used in connection with clothing for men or boys, was understood generally by the trade and by the purchasing public as meaning that the clothing had been made in Rochester, New York. A company manufacturing men's and boys' clothing operated under the name of the Rochester Clothing Company, although the main office and place of business was located in New York City. By means of tags attached to the clothing and bearing the company's name, the public was deceived into believing that the products of this company were made at Rochester, New York. (1923)

Since 1850, and especially since 1865, high-grade clothing for men had been manufactured at Rochester, New York, and the industry there had had a continuous growth in the number of factories and in the amount of capital invested. Besides Rochester, the principal centers of the manufacture of men's and boys' clothing in the United States were Chicago, New York City, Philadelphia, and Baltimore. Three grades of clothing were generally recognized by the trade: high-grade, medium, and cheap or low-grade clothing. Compared with the output of men's clothing in the places named, that of Rochester had, in 1923 and for many preceding years, the largest proportion of high-grade clothes manufacturers; the development of the men's clothing industry there had been marked by the early and progressive adoption of improved methods and conditions of manufacture. A superior type of labor and favorable labor conditions had enabled the manufacturers to apply skilled labor more profitably to the higher than to the lower grade of product, increasing that class of goods proportionately.

By 1892 the manufacture of men's clothing had become foremost among the industries of Rochester. In 1895 the Rochester

Clothing Exchange was organized there; the membership was made up of the clothing manufacturers of that city, and the purpose of the exchange was primarily to prevent labor troubles and generally to promote the interests and improve the conditions of the industry. One of the activities of the Rochester Clothing Exchange was to protect the reputation of the city as a clothing market against the use of the city's name, to its prejudice, by manufacturers elsewhere. The Rochester Clothing Exchange cooperated with the Chamber of Commerce of Rochester in advertising and fostering the reputation of Rochester for the manufacture of high-grade clothing for men and boys.

Among the activities of the Chamber of Commerce of Rochester was the adoption and dissemination of the slogan "Rochester-made Means Quality," which it applied to the clothing industry as well as to others. Furthermore, in the advertising conducted by the manufacturers of Rochester they made conspicuous the identity of their products with the city of Rochester. This activity had the result of establishing throughout the United States, for men's clothing made in Rochester, the reputation of a superior quality and value in style, workmanship, and reliability. The name "Rochester" when used on labels or tags attached to clothing for men and boys was understood generally by the trade and by the purchasing public as indicating that such clothing was made in Rochester, New York.

In 1923, Henry Mollowitz¹ was manufacturing and selling men's and boys' clothing, with his main office and place of business located in New York City. He operated, however, under the firm name of the Rochester Clothing Company. Attached to clothing made by him were tags or labels containing the words "Trade-mark, Rochester Clothing Company—for particular men." By this means the public was deceived into believing that the products of the Rochester Clothing Company were made at Rochester, New York.

¹ Fictitious name.

HINKEL—KRAUSS COMPANY²
HIGHGATE & COMPANY³
ROCHESTER CLOTHING COMPANY⁴

COMMENTARY: These three cases illustrate various forms of the practice of false or misleading assertions regarding the place of origin of a product. In such cases the chief injury is frequently to the competitor. The purchaser-consumer, of course, buys goods which are likely to be inferior in quality to the products of the city or country under whose name the goods are parading. But this inferiority of quality may be offset by a lower price. Hence the competitors of the Hinkel-Krauss Company and of Highgate & Company would be forced to lower their prices or sacrifice the quality of their goods in order to meet the competition. And the quality of the goods had been an important factor in building up their reputation and therefore their volume of sales.

An interesting problem is presented by contrasting the Hinkel-Krauss and Highgate cases as regards motive. In the former case, the firm had found itself possessed of the cutlery by virtue of its purchase of another business; the Hinkel-Krauss Company did not know that the cutlery was falsely marked, and, after disposing of the lot, which consisted of only a very limited supply, the company did not repeat the practice. In the Highgate case, however, the deception was continuous and was knowingly practiced. From either a moral or legal point of view, the difference in motive would constitute a radical distinction in the cases and would call for a difference in regard to any punishments inflicted on the parties concerned.

As a matter of business practice or business ethics, however, such a distinction is not a paramount question. The problem of business ethics is to discover practices which injure the competitor as well as those which injure the purchaser-consumer, and the chief purpose of business ethics is to stop such practices without necessarily imposing any punishment on the offending parties. An examination of the incidence of injuries inflicted by ignorant as well as by dishonest practices soon discloses the fact that there is very little difference in the degree of harm done. A "dumb" competitor is frequently as dangerous as a "crooked" one; hence the motive matters little to the student of business ethics. The Federal Trade Commission can, in either case, issue a "cease and desist" order. But in case redress for damage

² See page 352.

³ See page 353.

⁴ See page 355.

is desired, the civil courts must be resorted to by the injured party, and in a criminal action or in an attempt to apply moral condemnation, the motive factor assumes importance. Business ethics stresses the objective situation rather than the motive, and is interested chiefly in eliminating the injury by stopping the practice.

Another point brought out by these three cases is that the incidence of the injury is frequently quite widespread. There are, first, the interests of competing manufacturers in this country who label their goods honestly and who therefore are compelled to meet the sales appeal of a false statement, representing the goods as originating in a city which has built up a reputation for quality, by a price reduction which will effect competitive equality. And, secondly, there are the interests of two groups of sales competitors among the distributors of a product; in the case of the Hinkel-Krauss Company, for instance, these groups were: those who sold Sheffield ware honestly, and who could not compete, either in prices or in profits, with those who falsely asserted their cutlery to be of Sheffield origin; and those who did not deal in Sheffield ware and honestly stated that fact, and who therefore had to compete with the sales appeal of the Sheffield mark. In the Rochester Clothing Company case, furthermore, the manufacturing interests extended to the entire group of clothing manufacturers located in Rochester, and even to the whole Rochester manufacturing district, the reputation of which had been built up by years of activity and by extensive and expensive advertising campaigns.

Morality condemns the above practices primarily because of the offender's false position, and secondarily because of the immediate prospect of harm to the purchaser when misrepresentation of the origin of goods conceals a possible inferiority of the product. The law condemns these practices largely because of the incidence of damage to the purchaser; but the law, except in its administrative activities under the direction of government commissions, relies upon the purchaser to correct the evil by taking the initiative in prosecuting the suit in a court. The fact that a part of the injury extends to the trade is subordinated to other interests by morality and is practically disregarded by the law. Furthermore, the law would regard competitors' ignorance of the injury they were receiving as a basic reason for not offering social assistance to them to relieve them of their difficulties. Business ethics is more like administrative than civil law, in that it seizes upon this fact, that injury results to the trade as well as to the purchasing public, as the prime reason for insisting that the more alert members of a trade should eliminate practices, among themselves and in the trade as a whole, which are detrimental to fair competition and to trade health.

June, 1929

C. F. T.

DRAFTER TEXTBOOK COMPANY¹

PUBLISHER—BOOKS

SALES PROMOTION—*Misrepresentation as to Endorsement of Product.* In newspaper advertising and in a circular issued by a company which published textbooks in bookkeeping, shorthand, and kindred subjects, the company included statements and statistics, some of which falsely purported to be government reports or the reports of official organizations, proving the superiority of a certain system of shorthand over other systems. False claims also were made as to the use of this system by government employees and in schools conducted by the government, and a book-keeping course issued by this company was represented as having been drafted by the government.

(1919)

Henry Drafter, under the name of the Drafter Textbook Company, located in Nashville, Tennessee, was engaged in the business of publishing and selling textbooks, charts, lesson sheets, etc., whereby bookkeeping, shorthand, typewriting, business English, business arithmetic, and other studies were taught in business colleges and in home-study courses to students in various parts of the United States.

In 1919, during the course of his business activities, Mr. Drafter published and distributed printed circulars entitled "Government Reports on Pitmanic and Gregg Shorthand Writers." These circulars contained statements and statistics, some of which purported to be reports of official organizations or bodies, proving the superiority of the Pitman system of shorthand over other systems.

One of the reports declared to be a government report was that of a private organization composed of individual high school teachers; it was not a public organization or a government agency. Some of the statistics quoted in these circulars printed in 1919 were from the official report of the United States Commissioner of Education of 1913. A statement in regard to the percentage of official court reporters of the United States Government using the

¹ Fictitious name.

Pitman system of shorthand was not contained in any United States Government report. Another statement, to the effect that on certain blanks issued by the government for teachers of shorthand in schools conducted by the government, the following sentence appeared, "No one need apply unless he or she teaches the Pitmanic system," was false, as no such preference had ever been given government sanction. Under the caption "Still another government report" was published a report of the National Shorthand Reporters' Association, a private organization.

Similar intimations were contained in newspaper advertising of the Drafter Textbook Company with reference to alleged "decisions of the Supreme Court." References also were made in the advertising to the "civil service bookkeeping set drafted by the government," consisting of entries and problems taken from specimen entries issued by the United States Civil Service Commission and supplemented by comments and instructions prepared by Mr. Drafter himself. Claims that 85% of government employees used the training course system sponsored by Mr. Drafter were false. A statement was made that 85% of the government official court stenographers who received salaries of \$5,000 or more per year used the Pitman system, whereas no official stenographer for any United States court at that time received a salary of \$5,000 or more per year.²

² For commentary, see page 362.

BELLERON SOAP COMPANY¹

MANUFACTURER—SOAP

SALES PROMOTION—*Misrepresentation as to Endorsement of Product.* A soap manufacturing company sold one brand of its product as an antiseptic soap endorsed by physicians, whereas the soap was an ordinary unmedicated soap, without any particular antiseptic qualities, and had not been endorsed by physicians. Other brands of soap made by the company contained upon the carton printed statements that the soap had been “manufactured for” a medical association, although no such association had had any connection with its manufacture.

The Belleron Soap Company was an Indiana corporation, located at Indianapolis, which manufactured and sold soap. The company had been organized in 1895 by William Belleron and his brother, but since 1903 neither had had anything to do with the control or management of the company. Aside from the fact that an uncle of the Belleron brothers was a doctor, no Doctor Belleron had ever been connected with the corporation.

In conducting its business the Belleron Soap Company advertised in theatrical magazines and other publications, soliciting orders from street venders, peddlers, and other dealers. Exclusive sales agents were appointed for various territories in the United States. Representations of the Belleron Soap Company were to the effect that some of its soaps were medicated and possessed curative and healing properties, that they were made by a formula prepared by a physician and were prescribed by medical authorities, and that they were endorsed by “a national association of physicians.”

One brand of this soap was sold under the trade name of “Dr. Belleron’s Antiseptic Soap.” On the container of the soap was the statement “endorsed by eminent physicians throughout the land.” This soap was an ordinary unmedicated soap no more antiseptic than any other soap of similar quality. It was not a high-grade toilet soap, nor was it “endorsed by eminent physicians throughout the land;” neither did it contain medicaments pre-

¹ Fictitious name.

scribed by medical authorities. Other brands of soap made by the Belleron Soap Company contained upon the carton the printed statements "manufactured only by United States Medical Association," and "manufactured for National Medical Association," although no such association had anything to do with the manufacture of these soaps. The national body of physicians and surgeons of the United States is known as the American Medical Association.

DRAFTER TEXTBOOK COMPANY¹

BELLERON SOAP COMPANY²

COMMENTARY: The two preceding cases illustrate attempts which are sometimes made by businesses to achieve an enhanced sale value of their commodities by asserting an affiliation with, or endorsement by, an independent and reputable institution. In the Drafter Textbook Company case, the name of the United States Government was so used; similar cases have arisen in regard to the sale of "Army and Navy" goods, and in connection with the sale of such commodities as lumber, spark plugs, adding machines, salt blocks, motor fuel, and especially paints and varnishes. In the case of the Belleron Soap Company, the medical profession was similarly used; similar cases have occurred in connection with the sale of "electric" belts and disinfecting fluids. The American Medical Association is quite alert in handling cases of this sort, in which the consumer is, of course, affected directly by virtue of the fact that inferior goods can be sold on the reputation of a dependable institution.

The question arises: Who is responsible for stopping the practice? The United States Government and the American Medical Association are sufficiently jealous of their reputations to prosecute cases which are called to their attention. The purchaser-consumer should, one would think, have enough interest in the matter to report suspicious cases to such institutions. But, as a matter of fact, this method of controlling the situation cannot be relied on. Again, as in the cases illustrating misrepresentations as to the origin of products, the chief business injury is to the competitor who does not employ such tactics. Until comparatively recently the members of a trade have not realized that a considerable amount of the responsibility for initiating action against such practices rests with the trade itself. Publicity has become a powerful method of stopping unfair practices, and campaigns for educating the consuming public are available. Concerted action on

¹ See page 359.

² See page 361.

the part of a trade in calling the attention of government agencies, conspicuously the Federal Trade Commission, to unfair practices, is a further method of handling the situation. But the initiative rests largely with those competitors who are interested in seeing fair trade practices prevalent in the trade.

July, 1929

C. F. T.

MAZUR WHOLESALE GROCERY COMPANY¹

MANUFACTURER AND WHOLESALE—GROCERIES

COLLECTIONS—*Legal Action to Enforce Payment.* A wholesale grocery company found that it was futile to attempt to collect a comparatively small account from a dishonest customer by legal action. The company had contemplated obtaining an order of replevin but had decided to attach the customer's bank account and bring suit. Before the suit had been completed, other creditors had petitioned the customer into bankruptcy. Almost no tangible assets had been discovered, and the company expected to obtain nothing on its claim.

CREDIT—*Refusal to Extend to Dishonest Customer.* Upon discovering that one of the managers of a hotel to which it just had shipped an order for payment within 30 days had been through bankruptcy twice and had a court record for forging checks, a wholesale grocery company notified the manager that it would sell the hotel no more groceries except for cash. The company had no interest in maintaining the goodwill of the customer and ignored subsequent credit orders from him.

(1924)

In the spring of 1924, the Mazur Wholesale Grocery Company purchased the Pappas Company,¹ another wholesale grocery company. The Mazur Wholesale Grocery Company liquidated the latter company but planned to sell groceries to as many of its customers as possible. In accordance with this plan, on June 19, 1924, at the opening of the summer resort season, a salesman of the Mazur Wholesale Grocery Company called upon the Kehoe Hotel,¹ which operated in a summer resort and which had been a customer of the Pappas Company for several years. The hotel placed an order for \$288.34 worth of groceries with the salesman, for payment in 30 days. The credit department of the Mazur Wholesale Grocery Company investigated the record of the Kehoe Hotel and reported that the hotel always had paid its bills to the Pappas Company promptly. The Mazur Wholesale Grocery Company shipped the groceries to the hotel without further investigation at that time.

¹ Fictitious name.

Inasmuch as the managements of summer resort hotels changed frequently, the Mazur Wholesale Grocery Company investigated the Kehoe Hotel further after the goods had been shipped. The salesman was instructed to obtain as much information as he could concerning the credit standing of the Kehoe Hotel. The credit manager obtained a mercantile report on the hotel from Bradstreet's Commercial Agency, which stated that the hotel building and equipment had been sold at the close of the previous resort season and that the new owner had leased the property for the 1924 season to three men who had formed a partnership for the purpose of operating the hotel. The salesman of the Mazur Wholesale Grocery Company found that the partner who was most active in the management of the hotel had been through bankruptcy twice and had a court record for forging checks. The salesman was unable to discover any information about the business records of the other two partners.

The credit manager learned that the hotel had bought provisions on credit from several other companies. He suspected that the three partners planned to purchase on credit, obtain as large receipts as possible from the summer trade, and go out of business without paying the debts incurred. The Mazur Wholesale Grocery Company decided not to sell the hotel any more provisions except for cash, unless its reliability was demonstrated, and notified the hotel of this decision.

The Mazur Wholesale Grocery Company manufactured grocery specialties and distributed them throughout the western half of the United States. The company's chief products were coffee, cocoa, canned goods, and prepared specialties, such as peanut butter, fruit preserves, and meat dressings. Most of the provisions which it sold were prepared in its own factories, but when the output was not sufficient to meet the demand, the company purchased groceries from other manufacturers. The company sold the merchandise which it purchased, as well as that which it manufactured, under the Mazur brand.

The Mazur Wholesale Grocery Company had been established for approximately 50 years and was one of the largest grocery distributors in the United States. The company maintained branches in four of the leading distribution centers of the West. Each branch was controlled by a branch manager and had its group of salesmen. Complete stocks were carried at the branches,

in order to insure prompt delivery service. The company employed approximately 400 salesmen and paid them commissions on net sales. The company sold to retailers, hotels, and institutions, but not to chain stores. The terms of sale were 2% 10 days, net 30 days.

After the Mazur Wholesale Grocery Company notified the hotel that no further shipments on credit would be made, the hotel telephoned in rush credit orders to an aggregate amount of several thousand dollars. The company ignored these orders.

At the end of the 30-day credit period allowed on the first order, the credit manager of the Mazur Wholesale Grocery Company telephoned the treasurer of the hotel and asked him to pay the \$288.34 which was due. The treasurer promised either to do so within a day or two or to call upon the credit manager. As the treasurer did not keep this promise, the company sent its salesman to the hotel to collect whatever he could on the account. With great difficulty, the salesman obtained \$48 of the amount due. The credit manager believed that the hotel made this payment in order to forestall action on the part of the company so that the partners would have time to escape with the summer's receipts. The week following the salesman's call, the company sent a letter to the hotel notifying it that unless \$120, one-half the amount due, was paid within a week and the balance of the account within two weeks, the company would take legal action to collect. The hotel did not reply to this letter, and the credit manager prepared to take steps to enforce payment.

The question of the customer's goodwill did not enter into the problem, because the Mazur Wholesale Grocery Company was convinced that the men who were operating the Kehoe Hotel were dishonest and undesirable as customers.

Although the hotel had not paid for the groceries, it was the legal owner of them, since the title had passed to the hotel at the time of sale. Consequently, the Mazur Wholesale Grocery Company could not obtain an order of replevin, which would give the company the right to retake the groceries subject to a possible adverse decision in an action for their possession, without first proving fraud and rescinding the sale in order to recall the title. As the groceries were mostly canned goods, the company, if it recovered them, would be able to resell them without realizing any loss; the purchaser could be required to pay all handling and

transportation expense necessary to the return. The company, however, might find it difficult to rescind the sale and to obtain the order of replevin. It would be necessary for the company to go to court, show the original order, bill of sale, and statement of the account, and prove that the provisions in the possession of the hotel were those sold by the Mazur Wholesale Grocery Company, and that the Kehoe Hotel had been guilty of fraud. The identity of the groceries could be proved by a comparison of samples of the groceries held by the hotel with the stocks of the Mazur Wholesale Grocery Company, or by evidence that the groceries bore the Mazur brand, but it was impossible to anticipate whether or not fraud could be shown. Since the groceries ordered had been canned goods for current consumption and since telephone orders had been sent in for further supplies, it was probable that a large part of the provisions had been used. If an order of replevin were obtained by the company, it still would have to sue the hotel for the difference between the value of the supplies on hand and the amount of the order. The credit manager decided that it was impracticable to try to rescind the sale.

Another possibility was for the Mazur Wholesale Grocery Company to petition the Kehoe Hotel into bankruptcy. The company might be able to collect more through such action than by an order of replevin. The hotel had obtained at least \$500 worth of groceries from each of two other companies, and some of these groceries probably were still on hand. Moreover, since partners had unlimited liability, all the assets of the partners would be subject to the claims of their creditors. The company did not know what the value of the partners' assets was. The lease on the building and equipment would be of no value in settling the claims. The law required that one of the five acts of bankruptcy² be committed before a firm could be declared

² "Acts of bankruptcy by a person shall consist of his having (1) conveyed, transferred, concealed, or removed, or permitted to be concealed or removed, any part of his property with intent to hinder, delay, or to defraud his creditors; (2) or transferred, while insolvent, any portion of his property to one or more of his creditors with intent to prefer such creditors over his other creditors; or (3) suffered or permitted, while insolvent, any creditor to obtain a preference through legal proceedings, and not having at least five days before a sale or final disposition of any property affected by such preference vacated or discharged such preference; or (4) made a general assignment for the benefit of his creditors, or, being insolvent, applied for a receiver or trustee for his property or because of insolvency a receiver

bankrupt and also that the petition for bankruptcy be made by not less than three creditors with aggregate claims of at least \$500. The credit manager believed that bankruptcy proceedings would be too slow for his purposes and that before three creditors could agree and the right to petition be obtained, the partners would be gone with the summer's receipts.

Another option was for the company to attach the Kehoe Hotel's bank account and to sue for the purchase price of the groceries immediately. The height of the resort season in the locality in which the Kehoe Hotel operated came in the month of August, and the credit manager believed that the hotel would have sufficient funds in its bank to pay the account. Unless the company attached the hotel's bank account before giving notice of its intention to sue, the hotel would withdraw the funds from the bank. Before it could obtain an order of disclosure and attach the account, the company would have to prove fraud, transfer of property, nonresidence, or other grounds of attachment. An order of disclosure from the court required a bank to disclose whether or not the firm in question had a bank account and, if so, the amount of the account. The Mazur Wholesale Grocery Company, if it used this means of collection, would obtain payment in full, provided that the hotel's account was sufficient to meet the claim, that a judgment of the court was obtained, and that the attachment was placed upon the bank account before any of the other creditors had resorted to that measure. If it were found that the hotel's bank account was sufficient to pay but a small portion of the account, the Mazur Wholesale Grocery Company still could sue the hotel for the entire amount due.

The credit manager decided to try to attach the hotel's bank account and to file a suit for the amount due. The company placed the case with a lawyer in the summer resort. Within a week, he obtained an order of disclosure and placed an attachment on the Kehoe Hotel's bank account. Only a few dollars were in the account, however. The lawyer began the suit; but on August 23, 1924, a meat wholesaler, a flour mill company, and another creditor, with total claims amounting to approximately \$1,100, petitioned the hotel into bankruptcy. Total debts owed

or trustee has been put in charge of his property . . . ; or (5) admitted in writing his inability to pay his debts and his willingness to be adjudged a bankrupt on that ground." United States Bankruptcy Law of July 1, 1898, as amended, Sec. 3, "Acts of Bankruptcy."

were about \$2,500 and as far as had been discovered in September, 1924, the only tangible assets were about \$100 worth of provisions. The hotel had been closed. The Mazur Wholesale Grocery Company presented its claim for \$240.34 along with the claims of the other creditors. The credit manager, however, expected to obtain nothing on the claim and charged the amount to losses from bad debts.

COMMENTARY: The problem of the dishonest debtor has long taxed the ingenuity of lawmakers and more recently has been the especial study of credit men. One of the most effective devices for such a situation is bankruptcy procedure, which provides ample opportunity for examining the debtor and also makes provision for impartial administration, for the setting aside of preferences and fraudulent conveyances, and for heavy penalties for fraud or irregularity. On the other hand, it is a cumbersome and expensive procedure and one likely to result, as in this case, in the recovery of little or nothing from a small estate. It is, of course, simpler to proceed, as the creditor in this case did, singly in the hope of discovering some estate and attaching it before judgment on the ground of fraud. But such action tends, as in the case before us, to give the alarm to other creditors and to precipitate bankruptcy proceedings. Even if it is temporarily successful, the preference obtained by a creditor with knowledge of the insolvency of the debtor can be set aside, provided bankruptcy proceedings are commenced within four months after the "involuntary" preference.

May, 1927

N. I.

LATIMER COMPANY¹

MANUFACTURER—MOTORS

COLLECTIONS—*Creditors' Acceptance of Composition Settlement.* The debtor, a motor wholesaler, whose creditors had filed a petition in bankruptcy, had an equity of \$4,250 in real estate holdings, and stock on hand valued at \$7,500. He owed \$26,500 to banks on notes indorsed by his father, and \$14,500 to general creditors, to whom he offered a cash composition of 20%. The banks agreed to extend their accounts by taking notes indorsed by the debtor's father, and to forego the composition settlement. Because the settlement did not seem capable of improvement, and because the debtor probably would favor the creditors who accepted it, in the event that he became a desirable customer again, the law department of a creditor to whom the debtor owed \$1,065.30 on account, besides a \$900 note plus accrued interest, decided to accept the composition offer.

(1922)

In September, 1922, the Latimer Company, which manufactured motors, received the following letter from John Case, a motor wholesaler of Cincinnati, Ohio, whose indebtedness to the Latimer Company consisted of an open account balance of \$1,065.30 and a nine months' note for \$900, due April 7, 1922, plus accrued interest at 6%. The account had been transferred from the collection department to the law department on May 31.

Cincinnati, Ohio,
September 8, 1922

Law Department
Latimer Company
New York City

GENTLEMEN:

Schedules have been filed showing total liabilities of \$40,328.72 and assets amounting to \$17,264.20. These assets include real estate valued at \$7,500. If this real estate and stock are sold at a forced sale in bankruptcy proceedings, you understand that much less than their schedule value will be realized.

I have made effective arrangements to offer a cash composition to the unsecured creditors of 20% of their claims and expect to

¹ Fictitious name.

offer this composition at meeting of creditors to be held in Cincinnati on September 13, 1922, at 11 a.m.

This offer of composition is the best that I am able to make with the limited amount of capital which I am able to raise, and I know it will be to the advantage of the creditors to accept the same.

Your prompt action in this matter will be necessary if you favor the composition, as it cannot be consummated unless accepted by the required number of creditors and approved by the court.

Very truly yours,

JOHN CASE

The first meeting of the creditors had taken place early in June. They agreed that if the business were allowed to continue, the assets would equal approximately the liabilities and that there was a fair chance of a profit, but that if the business were closed out at a forced sale, the creditors would lose considerable money. A majority of the creditors concluded that the best policy would be to continue operations and, at the same time, to create new business if possible, as Mr. Case had an established name and goodwill among his customers.

Since bankruptcy proceedings, voluntary or involuntary, would destroy goodwill and be detrimental to the business, the creditors had planned to secure an assignment from Mr. Case, conveying his entire interest in the business, as well as all real and personal property, to a manager appointed by a committee of creditors. The manager was to have complete charge of the business under the direct supervision of the committee. Under this plan, the office and working organization would remain intact, but Mr. Case would be deprived of authority until the financial condition of the business had improved.

At another meeting of the creditors a few days later, the idea of a creditors' committee was abandoned, because the large interests of the Case family in the business seemed to make it expedient for one of its members to take a leading part in restoring the business financially. Mr. A. M. Case was the logical person, since in addition to being a large creditor and the brother of John Case, he was anxious to protect the interests of his father, who had indorsed many of the notes given by John Case.

It was agreed to continue the business under the management of Mr. A. M. Case for a trial period of 90 days with expenses reduced to a minimum. All the creditors consented to maintain

the status quo on their accounts during that time. At the end of the three months, another creditors' meeting was to be held, when it could be determined whether to continue operations until the past-due indebtedness was paid or to discontinue the business.

After five weeks it became evident that the plan was not operating to the advantage of the creditors, and at another meeting it was decided that bankruptcy was the only solution. Accordingly, a formal petition in bankruptcy was presented the following morning. The petition was granted on July 14.

At this time, apparatus valued at \$555.20 was returned to the Latimer Company from the wholesaler's stock, leaving an open account balance of \$1,065.30 and the note indebtedness of \$900 plus accrued interest.

One of the creditors outlined the situation in September, 1922, as follows:

The real estate holdings of John Case are now appraised at \$7,500, against which there is a mortgage of \$3,250, an equity of \$4,250. The stock is valued at \$7,500 against their previous estimate of \$14,000.

The total amount owed to all creditors is approximately \$41,000, of which amount \$26,500 is owed to banks on the indorsement of Mr. Case's father.

On September 13 a meeting will be held to vote upon a composition of 20% to the general creditors, to whom is owed approximately \$14,500. In the event that the general creditors agree to accept this settlement, the banks have agreed to extend their accounts by taking notes indorsed by the elder Mr. Case, foregoing the composition settlement at 20%. Such a settlement would mean that an outlay of approximately \$3,000 would have to be made in order to satisfy unsecured creditors, which the banks, no doubt, would be willing to advance in order to protect their own large account.

The fact that the banks were willing to extend their accounts implied that the settlement was not generous. It was difficult to determine, however, how the offer could be improved. If the composition was accepted and if Mr. Case became again a desirable motor customer, he would be likely to favor the Latimer Company. The law department, therefore, decided to accept the offer of composition.

COMMENTARY: Bankruptcy proceedings constitute a legal device inherited from the practice of merchants in medieval Europe and

extended and developed by our law so as to meet certain types of modern business problems. In the course of this development, bankruptcy has changed from a procedure applicable to traders only into a procedure of rather general applicability to debtors; from a procedure primarily official into an arrangement primarily for the protection of the honest but involved debtor; from a device occasionally applied to clear away the accumulated debris of business failures to a constant and continuing branch of our law. By reason of the constitutional provision, the Federal government has the optional power to control bankruptcies. The present policy seems to be to exercise this power continuously and thereby give the Federal government a kind of control over business that is not interstate or otherwise within the purview of Federal jurisdiction.

Like all other legal devices that come to us from the past, bankruptcy must be carefully scrutinized, together with alternative devices, before determining whether it is the best available device in any given business situation. In general, it is desirable where there is any suspicion of fraud on the part of the debtor. It is particularly useful where a preferential payment—not in itself illegal—has been made, for the Bankruptcy Act gives not merely a new procedure but new substantive rights to the body of creditors in such a case. On the other hand, it is an expensive procedure and therefore not likely to prove worth while in very small transactions. It is also a comparatively inflexible procedure, and therefore is hardly desirable where a reorganization or readjustment of some kind is the objective sought rather than that of winding up a business. Quite apart from the legal rights of the creditor in this case, there appeared no genuine advantage in pressing the claim through the bankruptcy court. On the contrary, the hope of further dealings with the customer suggested the course pursued here.

April, 1927

N. I.

LONGSHORE PUBLISHING COMPANY¹

PUBLISHER—BOOKS

RETURNS AND ALLOWANCES—*Refusal of Manufacturer to Accept Return of Unsold Merchandise.* In 1922 the first issue of a book produced by a publishing company sold so rapidly that the company's customers placed large repeat orders. After the company had delivered part of the additional copies printed, the book lost its popularity; both the company and the dealers were left with large unsold stocks. Because the company had not urged its customers to place repeat orders and thus did not consider itself responsible for their excess stocks, it declined to grant their requests for return of the books and for credit allowances.

(1922)

The Longshore Publishing Company, one of the leading book publishers in the United States, divided its organization into trade, educational, and subscription departments. The trade department, which published books of popular fiction, biography, travel, history, poetry, essays, and children's books, employed six salesmen to call upon dealers. This department made 75% of its sales directly to retailers and 25% to wholesalers. The principal wholesale customers were three large companies which distributed nationally. The salesmen made periodic calls upon the dealers and took orders in advance for those new books which the department would offer for sale before the salesmen's next visits. The company did not enter into sales contracts with the dealers.

In 1922 the trade department produced a new book written by a man unknown as an author but prominent in public affairs in the United States. The company agreed to pay this author a royalty on each book sold, except on copies sold below cost. In accordance with preliminary estimates, the department ordered the printing of 25,000 copies. The six salesmen of the department solicited advance orders by emphasizing the timeliness of the subject of the book and the prominence of the author. When the first issue was ready for distribution, however, the advance

¹ Fictitious name.

orders totalled only 13,000 copies, because dealers were skeptical of the book's popularity. Within a few days after bookstores placed the first issue on sale, the dealers began to place repeat orders. The company found it necessary, because of a general strike in the vicinity, to contract with other publishing companies for the printing of additional copies to meet the demand. The later printings totalled 58,000 copies, and 50,000 copies had been delivered on repeat orders when the book lost its popularity. The company had 20,000 unsold copies and substantial stocks were held by numerous dealers, who requested that they be permitted to return the books for credit.

The company quoted to its dealers a list price, or retail selling price, for each book published. Frequently the list price was printed on the protective cover in which the book was wrapped. Books were sold to retailers and wholesalers at list prices less certain discounts; a larger discount was given to wholesalers. At one time, it was a common practice for large retail stores to advertise their main lines by selling books at less than cost. Small retailers had asked the publishers for protection from such competition, and, as a result, the publishers had formed an association to combat the practice. Each member of the association had refused to sell books to any retailer who sold at less than the list prices books published by any member. Such an association had been held to be unlawful under the Clayton Act, in spite of the fact that the books were copyrighted and that publishers were free to sell or suppress the books as they saw fit. Through the educational efforts of the publishing companies, however, all retailers, both large and small, had begun to realize the benefits of maintaining the list prices. In 1922, it was the custom among book retailers to maintain the list price of a book for at least one year after the date of the first issue.

It was an announced policy of the Longshore Publishing Company not to accept the return of books sold to dealers by the trade department and not to allow dealers credit for their losses on unsold books. When a book sold slowly or was a failure, however, dealers who were overstocked might write directly to the company to request that it permit the return of the books or grant a credit allowance on them. Although the company reserved the right of refusing such requests, it usually granted them in order to accommodate the dealers. If the company issued a new edition of any

book to replace the old edition and to be sold at a lower price, a dealer might return the unsold copies of the old edition or sell them below the price that he had paid for them and receive credit equal to the difference between the price which he had paid and the price which he had received.

The Longshore Publishing Company had not urged dealers to place repeat orders for the new book and had filled only part of all orders for initial delivery. It was not responsible, therefore, for the excess stocks which the dealers had on hand. The book's sudden popularity had caused both the dealers and the publisher to be over-optimistic. The company had sold the book at an average price of \$1.80. It was estimated that dealers would have to sell their remaining stocks at prices as low as \$1 a copy, with a consequent loss of 80 cents a copy. On this book, however, every dealer had made profits against which he could charge the loss on the overstocked copies. If the company permitted the dealers to return their excess stocks, it would have to sell the copies at a substantial loss, as it already had found it necessary to accept a price of 20 cents a copy in order to move the supply on hand. The manufacturing cost to the company had been 56 cents a copy, the estimated administrative cost had been approximately 60 cents a copy, and the royalty on each copy sold above cost was about 60 cents.

No loss of customers was apprehended if the company refused to allow the dealers to return the books, because they understood and accepted the company's attitude. The company believed also that its publications were necessary to the retailers' businesses and that any severance of relations by an individual dealer would react more unfavorably to him than to the company. The company's relations with customers always had been satisfactory.

The company declined, therefore, either to accept the return of or to make any rebate adjustments on the book. Although a few dealers protested, both the dealers and the company accepted a loss in the disposal of their surplus stock. The books were offered for sale at whatever price could be obtained. The company disposed of most of its surplus stock at prices ranging from 20 cents to 10 cents.

COMMENTARY: The practice of manufacturers in some industries of dealing with independent distributors of their goods as if they were agents, to the extent of relieving them from the risk of non-sale,

assumes in some instances the rigidity of a custom or at least of an implied term in the contract of sale existing between manufacturer and distributor. Nevertheless, in any given instance it may be provable that the taking back of unsold goods is entirely optional with the producer. The publishers in this case took this view of their legal rights. The question of policy still remains to be determined, for, obviously, the purposes of publishers generally in assuming the risk of non-sale—namely, to cut down sales resistance, to increase goodwill, to protect against their own mistakes the impecunious dealer on whom they must rely in the long run for distribution, and to discourage price cutting—are sufficiently important to make the publishers hesitate a long time before departing from the custom. The case before us probably was an extreme one.

May, 1927

N. I.

BULLEN MANUFACTURING COMPANY¹

MANUFACTURER—LOOSE-LEAF AND BOUND BOOKS

SALES PROMOTION—*Merchandise Display Devices Offered by Manufacturer to Retailers.* A company manufacturing loose-leaf and bound memorandum books, recognizing that its product did not lend itself to display in ordinary show cases, sought an effective means of retail display. A competitor offered to retailers a revolving case at \$125 for five years under a lease agreement which approached "full-line forcing," condemned by the Federal Trade Commission and by some courts. Some of the company executives urged that the company offer retailers a similar case on similar terms. The company decided, however, to offer instead a flat rack upon which the books could be displayed openly and which, complete with samples of books, would cost retailers approximately \$40.
(1922)

The loose-leaf and bound memorandum books made by the Bullen Manufacturing Company were sold by retail stationers throughout the United States. This company, in common with its competitors, recognized the difficulties which the retailers experienced in displaying such products effectively. The merchandise was bulky and did not lend itself to display in ordinary show cases. The tendency, therefore, was for retailers to keep their stocks of loose-leaf and bound books in boxes as received from the manufacturers.

This practice increased the difficulty which the retailers' salesmen experienced in selling the merchandise. A member of the management of the Bullen Manufacturing Company remarked that "the average salesmen employed by stationers are paid for the ability required to sell pencils and are not capable of selling from the shelves blank books and loose-leaf goods intelligently so as to meet customers' needs." The company, however, had no accurate information as to the capabilities of salespersons employed by the stores selling its products, or as to the average size of those stores.

¹ Fictitious name.

Some of the largest and most recently built stores which stocked the company's merchandise had installed wall drawers with electrically lighted niches in front, in which could be displayed a sample of each type and size of book sold by the company. The cost of installation made use of this display impracticable in the smaller stores and in some of the older stores. The company encouraged retailers to display its products in the windows of their stores by showing in its monthly house organ photographs of attractive window displays actually used by some of its customers. The company's salesmen did not follow up this work, and the company was of the opinion that its suggestions were not used by many of its customers.

In March, 1922, the Kirkson Company,² a competitor of the Bullen Manufacturing Company, issued a circular to the trade describing a show case which that company was prepared to supply to retailers for the display of its loose-leaf memorandum books; sales of these books comprised about 10% of the company's total sales of loose-leaf and bound books. A case of this type, which was valued at \$300 by the Kirkson Company, could be leased by a retailer for five years for \$125, under the agreement which follows. The Kirkson Company verbally promised its large customers that at the end of the five-year period it would give them any cases they had leased.

KIRKSON COMPANY

LOOSE-LEAF MEMORANDUM BOOK DISPLAY CASE AGREEMENT

This Agreement, between *Kirkson Company*, a New York Corporation referred to as Lessor and _____ hereinafter referred to as Lessee, *Witnesseth*: That Lessor has leased to Lessee one Kirkson Loose-Leaf Memorandum Book Display Case No. _____ in good order, for a term of Five (5) years, in consideration of which the Lessee agrees to pay Lessor ONE HUNDRED AND TWENTY-FIVE DOLLARS (\$125) at the execution of this agreement.

1. Lessee expressly agrees that title of said case is and shall remain in the Lessor; that he will display said case conspicuously in his store; that he will under no consideration remove Kirkson name plate from

² Fictitious name.

said case, and he will use said case only for displaying loose-leaf memorandum books made by Kirkson Company.

2. The Lessee further agrees that the agents of the Lessor may at any reasonable time enter his premises for the purpose of inspecting the said case and its manner of use; and providing it is found that it has been used for other purposes than that specified above, Lessee agrees to return the said case to the Lessor upon demand and to make delivery thereto at such place as shall be designated by Lessor; or the Lessor may in such case at his option without previous notice or demand, either with or without legal process, enter any premises where the said case may be and take possession of and remove the same; and the Lessee hereby releases any claim or any right of action for trespass or damages caused by reason or nature of such removal, and disclaims any right or resistance thereto, and Lessee waives any right of homestead or exemptions against this obligation.

3. If the Lessee after such demand shall fail or refuse to deliver said case to Lessor as herein provided, it is hereby agreed that damages due Lessor for such failure are Three Hundred Dollars (\$300), which is the agreed value of said case, and that Lessor, at its option, may elect to recover possession of or said damages.

4. It is further agreed that, in the event of any breach by the Lessee of any condition hereof, the Lessor may at its option file this lease, or a copy thereof, in any court with or without an affidavit of default, and enter in said court such action as, in the judgment of its attorneys, be best adapted for the recovery of said case without security or bond being given, or for Three Hundred Dollars (\$300); and any attorney is hereby authorized to appear in said action for the Lessee and confess judgment against the Lessee in said action; and the clerk or prothonotary of said court is hereby to appear in said action for the Lessee to enter said action and confession of judgment, and thereupon issue such writ in the nature of a writ of possession or in the nature of execution as shall enable the Lessor to obtain the said case by process of law, or to recover said damages, the Lessee hereby releasing and waiving to the Lessor, and to the Sheriff or other officer of the law and to all parties concerned in such taking of possession or recovery of damages, all errors and rights of appeal and stay of execution. If any breach occurs and the Lessor does not forthwith exercise its rights as above, such extension or indulgence shall not be considered in fact or in law as a waiver of any such rights, whether in respect to said breach or any subsequent breach.

5. The Lessee further agrees that he will not underlease the said case or loan the same to any other person or corporation, and that he will maintain the said case in good order and condition so that upon surrender at the expiration of lease, or in case of failure to comply

with the terms of the lease, the same may be in as good condition as when received, reasonable wear and tear excepted.

6. The Lessee further agrees that should the Lessee, or any agent or employee, use said case for the purpose of displaying any goods other than loose-leaf memorandum books made by Kirkson Company then the Lessee shall pay the Lessor the sum of Three Hundred Dollars (\$300), which the parties hereto agree shall represent the loss sustained by the Lessor in such case in respect to its goodwill and trade name, and said sum shall be paid as fixed and liquidated damages and not as a penalty, and upon breach of this covenant by the Lessee, the Lessor may file this lease or a copy thereof in any court, with or without an affidavit of default, and enter in said court such action as may, in the judgment of its attorneys, be best adapted for the recovery of said sum, and any attorney is hereby authorized to appear in said action for the said Lessee and confess judgment against the Lessee in said action and the clerk or prothonotary of said court is hereby requested by Lessee to enter said action and confession of judgment and thereupon issue such writ in the nature of a writ of execution as shall enable the Lessor to recover said damages, the Lessee hereby releasing and waiving to the Lessor and to the Sheriff or other officer of the law, and to all parties concerned in such recovery of damages, all errors and rights of appeal and stay of execution. If any breach by the Lessee of this Clause 6 occurs and the Lessor does not forthwith exercise its rights as above, such extension or indulgence shall not be considered in fact or in law as a waiver of any such rights, whether in respect of such breach or any subsequent breach.

7. The Lessee further agrees that this instrument may be recorded, registered, or filed in the proper office or offices by the Lessor, and if so recorded, registered or filed, the Lessee will reimburse the Lessor for the fees paid for such recording, registration or filing.

Kirkson Company
Lessor

Dated: May 10, 1922

By L. M. Jones

Witnesses:

Lessee

By _____ Mgr.

The Kirkson Company's display case was rectangular, about five feet high and two feet wide. The frame was of metal and the sides of glass. Inside the case was an octagonal framework divided into pigeonholes into which the various sizes and types of loose-leaf books fitted; only the backs of the books were visible

through the glass sides of the case. One side of the case could be opened and the framework holding the books could be rotated, so that any book might be reached through the opening. The manufacturer's name was displayed prominently. In the bottom of the case were drawers to hold stocks of paper for the books. When filled, the case held six loose-leaf memorandum books of each type and size manufactured by the Kirkson Company. The rental price of the case for the five-year period of the lease, plus the cost, at list prices, of filling the case with the merchandise it was designed to hold, was approximately \$750.

The purposes of the display case were to encourage retailers to stock a full line of the company's loose-leaf memorandum books, to provide the retailers with a convenient place in which to keep stocks of the merchandise, and to enable retailers to display the merchandise prominently and attractively.

The Kirkson Company's offer to supply its customers with display cases designed to hold full stocks of its loose-leaf memorandum books, on condition that the retailers display the cases prominently and place the products of no other manufacturer in them, was akin to what is known as full-line forcing. Joseph E. Davies, in his book *Trust Laws and Unfair Competition*, says of full-line forcing:

"This consists in a requirement that specified goods be handled on pain of refusal to furnish certain other goods or to give certain discounts or other favorable terms. It is often called full-line forcing, because a manufacturer of a particular brand of goods which is specially desired may insist that all his other goods, for which there is no special preference, shall be taken in lieu of those of rival makers as a condition of obtaining supplies of specially desired goods, thus attempting to force the dealer to handle the 'full line' of the manufacturer. Thus, a former Commissioner of Corporations complained that salesmen of the International Harvester Company used to require dealers to order the so-called 'new lines' (i.e., tillage implements, wagons, manure spreaders, etc.) as a condition of retaining the agency of some brand of the company's harvesting machines.

"Full-line forcing is closely analogous to the requirement of exclusive dealing. The latter forbids buying from competitors, the former requires that goods which might otherwise be bought from competitors be bought from the company which enforces the demand."³

³ Joseph E. Davies, *Trust Laws and Unfair Competition*, Department of Commerce, 1915, Section 14, page 321.

In *United States v. American Tobacco Company, et al.*,⁴ the defendants were enjoined among other things from "refusing to sell to any jobber any brand of any tobacco product manufactured by it, except upon condition that such jobber shall purchase from the vendor some other brand or product also manufactured and sold by it; provided, however, that this prohibition shall not be construed to apply to what are known as 'combination orders,' under which some brand or product may be offered to a jobber or dealer at a reduced price, on condition that he purchase a given quantity of some other brand or product."

The Federal Trade Commission decided in 1918 that the use of one product to enforce the purchase of other products, to the exclusion of goods of competitors, constitutes an unfair method of competition in violation of the Federal Trade Law.⁵

The Bullen Manufacturing Company did not have, late in 1922, extensive information as to the popularity of the Kirkson Company's show case among retailers. The company knew, however, that a number of its own customers had leased cases from the Kirkson Company, and it was of the opinion that the case generally was regarded favorably by retail stores. Retailers received a larger margin of profit on loose-leaf books than they did on most other stationers' supplies and, hence, wished to avail themselves of means of increasing their sale of those items.

Some of the executives of the Bullen Manufacturing Company recommended that that company devise a display case similar to the case of the Kirkson Company and offer it to retailers on terms similar to those prescribed by the Kirkson Company.

The Bullen Manufacturing Company did not, however, introduce the case as recommended. Instead, the company made use of flat racks upon which its goods were displayed openly. These racks, complete with a sample demonstration outfit of loose-leaf memorandum books, cost retailers approximately \$40 each.

In October, 1925, the Bullen Manufacturing Company still was of the opinion that these flat racks were on the whole more satisfactory than were the cases of the Kirkson Company. Goods displayed on the racks were visible to the customer and readily accessible. The racks did not occupy much floor space and did

⁴ 191 Fed. 371, 429 (C.C., 1911).

⁵ *Federal Trade Commission v. Gratz*, 1 Federal Trade Commission Decisions, 249; 1918.

not require the purchase of a more extensive line of the books than the average stationery store could stock profitably.

An executive of the Bullen Manufacturing Company made the following statement:

"We think it much better to leave this matter of carrying stock to the individual retailer to adapt to his own store layout and to his own demands. All we furnish him with is simply a demonstration outfit for display. The goods are not supposed to be sold, although they can be sold.

"There is a deliberate attempt in the Kirkson Company contract to limit the goods shown to those manufactured by that company.⁶ I do not know whether that company has made any

⁶ The *American Bar Association Journal*, in May, 1923, printed an article on exclusive dealing in which were discussed certain decisions of the Supreme Court concerning practices similar in some respects to that of the Kirkson Company in leasing its show cases to retailers. This article read, in part, as follows:

"In *Federal Trade Commission v. Sinclair Refining Company* (October Term, 1922, Nos. 213, 637, 638 and 639) the Supreme Court held proof against attack by the Commission the practices of a number of large producers of gasoline, wherein they leased gasoline pumps to retailers at a nominal rental, taking the promise of the retailers not to use the pumps in selling competing gasoline. The Commission had attacked this practice as a violation of Section 3 of the Clayton Act, which makes it unlawful to sell or lease wares, machinery or other commodities for use or resale, or fix a price charge therefor on the condition or agreement that the lessee or purchaser shall not use or deal in the commodities of a competitor of the lessor or seller, where the effect may be substantially to lessen competition, or tend to create a monopoly. The decision points out that the contracts in question did not limit the privilege of a lessee to deal in the gasoline of a competitor, and hence did not fall within the letter of Section 3 of the Clayton Act, but counsel for the Commission contended that since the great mass of retailers of gasoline would not encumber themselves with more than one gasoline pump, the effect of the contract was to prevent the retailers from selling the gasoline of competitors. From this it was contended that the action fell within the spirit of Section 3 of the Clayton Act, and reliance was placed on *Standard Fashion Company v. Magrane-Houston Company*, 258 U. S. 346, and *United Shoe Machinery Corporation v. United States*, 258 U. S. 451. The court distinguished the Standard Fashion Company case on the ground that it had, in passing upon that case, construed the contract as containing a promise not to sell the commodity of others, and so violated the express provision of the Clayton Act. While practice attacked in the United Shoe Machinery case, under Section 3 of the Clayton Act, did not involve a promise by users of the corporation's machines not to use the machines of competitors, but only the stipulation providing for cancellation of the lease if competing machinery was used, it is to be noted that Section 3 of the Clayton Act prohibits a lease upon condition, as well as upon agreement. It was therefore distinguishable on the same ground as was the Standard Fashion case.

"In holding the practice as to gasoline pumps lawful, the Supreme Court did not hold immune from attack a practice which violated the spirit though not the letter of Section 3 of the Clayton Act because, as the court points out, there were many competitors seeking to sell excellent gasoline. Any retailer, if he wanted to sell through pumps, could obtain by the small investment necessary to buy a pump the gasoline both of the companies being proceeded against and of their competitors. He could do the same without any outlay if he cared to sell from barrels." Herman Oliphant, "Exclusive Dealing," *American Bar Association Journal*, May, 1923, page 311.

effort to enforce this provision of the contract. Other manufacturers, however, have been unable to enforce similar contracts with retailers. I think it very inexpedient for manufacturers to attempt to enforce such contracts. There is, of course, a certain psychological influence on the mind of the store buyer to order goods of the manufacturer supplying the case. The Kirkson Company makes it very easy for the retailer to order Kirkson goods by placing the Kirkson number of the item opposite the pigeonhole to be filled.

"Manufacturers leasing to retailers display facilities have not in every case enforced the prescribed payment for the lease. Where the manufacturer has been desirous of securing representation for his line in a store, display material and selling helps of this sort frequently have been donated. These have not, to my knowledge, been actually donated, but there has been a passive understanding between the store manager and the manufacturer that, although billed for the display materials, it is a bill the store is never to pay. The bill, of course, will be outlawed automatically in about seven years. Because of the less expensive nature of our store equipment, we have never had to adopt this practice and have always received full payment."

COMMENTARY: The unwillingness of the law to permit a manufacturer to tie independent dealers to his organization by agreements to continue to serve as outlets for his products has taxed the ingenuity of manufacturers to find a substitute, either within the law or outside it, for such contracts. Within the law, as a substitute for the sales contract, they have chanced upon the lease, the use of which was upheld in the gasoline pump cases.⁷ In the case before us, the company attempted to use the same principle, but in applying it through a lease of a display rack rather than in a device more obviously necessary in the process of selling, the company had the double disadvantage of less likelihood of control of the industry and a less convincing position in court. The second of these disadvantages is made more serious because the display rack as a practical commercial proposition must virtually be given away or abandoned to the dealer, so that the whole lease becomes a most obvious fiction and is likely to be treated by the courts as was the so-called license in the talking machine cases.⁸ In those cases the manufacturers attempted to control exclusively the use of talking machines in the hands of the dealer and of the ultimate purchaser as well, through affixing a notice to every instrument

⁷ *Federal Trade Commission v. Sinclair Refining Company*, 261 U. S. 463.

⁸ *Straus v. Talking Machine Company*, 243 U. S. 490 (1917); *Boston Store v. American Graphophone Company*, 246 U. S. 8 (1918).

to the effect that nothing was sold during the life of the patent having the longest term to run but a license to use the machine in conjunction with parts and records manufactured by the manufacturer of the machine. The pretense was that title was to pass to the purchaser of the machine only at the expiration of the last of the patents.

July, 1927

N. I.

TALCOT WHOLESALE DRUG COMPANY¹

WHOLESALE—DRUGS

STOCK CONTROL—*Use of Departmentized Merchandise Records.* A wholesale drug company, in order to ascertain what merchandise was profitable and what unprofitable, decided to establish seven merchandise departments and to keep records of expenses, purchases, sales, and inventories by those departments. For the use of buyers and other executives, the statistical department of the company prepared estimated departmental profit and loss statements monthly.

ACCOUNTING—*Basis for Distribution of Departmental Expenses.* A wholesale drug company which distributed expenses to its merchandise departments on a variety of bases decided to vary the amounts of shipping, checking and packing, and office expenses charged to a department in accordance with variations in the department's labor costs. Previously those expenses had been distributed on the basis of the proportion of actual or weighted departmental sales to total sales. This method had served to penalize departments for increasing sales.

(1921-1922)

The Talcot Wholesale Drug Company took a complete physical inventory twice each year and obtained a profit and loss statement for the company as a whole on June 30 and December 31. On June 30, 1921, the profit and loss statement showed a loss of \$150,000 for the first six months of the year. As the company did not keep records by departments, it was unable to determine on what products losses had been incurred. The company decided that some form of records by main groups of merchandise would have to be kept in order to make possible adequate control of purchases and sales.

The Talcot Wholesale Drug Company sold the customary lines of wholesale drug products, such as proprietary medicines, drugs, chemicals, and pharmaceuticals, and, in addition, several lines of candies, cigars, bottles, and drug store fixtures. Its annual net sales averaged approximately \$3,000,000. The company's 25 salesmen sold to 6,000 retail druggists within a 100-mile radius of

¹ Fictitious name.

the city in which the company was located. The terms to customers were 2% 10 days, 30 days net, with interest at 6% after 30 days. Three buyers did all the purchasing for the company. There was a buyer for proprietary medicines, one for sundries, and another for all other products. Cash discounts obtained from manufacturers ranged from 1% to 8% for cash within 10 days.

The company made purchases from approximately 1,500 manufacturers. It ordered from some manufacturers every few days, while from others it ordered only once or twice a year. Each month the company placed on an average approximately 2,500 orders with manufacturers and received approximately 15,000 orders from customers. In order to meet the demands of its customers, the company maintained an inventory of approximately \$300,000 worth of merchandise. The stock-turn ranged from seven to eight times a year.

In July, 1921, the company employed an accountant to analyze its records. The accountant proposed that the company keep inventory, sales, purchase, and expense records by seven departments, established on the basis of the customary trade classification of products. That classification tended to place in the same departments items upon which the company obtained similar percentages of gross margin. The seven departments suggested were: candy and cigars, proprietary medicines, crude drugs, sundries, pharmaceuticals, chemicals, and bottles and druggists' fixtures.

The accountant proposed that the next physical inventory be taken by these seven departments. No difficulty was anticipated in assigning the various products to the proper departments or merchandise control accounts. Most of the merchandise already had been stored and physically departmentized by those classifications. Expenses were grouped by several main service departments, such as the accounting and the statistical departments; the totals of those groups could be distributed to the merchandise departments if some equitable basis were determined. Certain items of expense could be charged directly to the departments. Exhibit 1 lists the company's expenses, other than for merchandise, for the year 1920.

The accountant also suggested that the company, for the purpose of merchandise control between the physical inventory

periods, determine the value of departmental inventories monthly by means of estimated cost of sales, based on estimated departmental gross margins.

EXHIBIT I

EXPENSES OF THE TALCOT WHOLESALE DRUG COMPANY FOR THE YEAR 1920

Expense Items	Amount
Officers' salaries.....	\$ 30,449
Wages.....	50,928
Repairs.....	10
Depreciation.....	998
Insurance and taxes.....	9,319
Miscellaneous supplies.....	2,415
Maintenance.....	35,506
Heat, light, and power.....	5,951
Checking and packing.....	47,086
Receiving and shipping.....	53,519
Office expenses.....	105,216
Sales managers' salaries.....	15,184
Salesmen's commissions and expenses.....	69,099
Advertising.....	8,886
Cash discounts.....	14,759
Credit losses.....	<u>7,224</u>
Total.....	\$456,549
Interest paid.....	\$ 783

The company decided to departmentize in accordance with the accountant's suggestions. It did not question the advisability of knowing the actual net profit of each department every six months and the estimated net profit each month. There was, of course, the difficulty of establishing an equitable basis for the distribution of expenses. Many of the expenses could be charged directly to the merchandise departments, and the company believed that a reasonable basis for the distribution of the other expenses could be arrived at. No additional records were necessary, and the distribution would be made only once each month.

A statistician was placed in charge of the departmentization program. Each of the seven departments was given a code number, and duplicates of all sales invoices were coded by departments. In order that departmental net sales and net purchases might be determined, allowances for freight, special discounts to customers, returns, rebates, and transfers were kept by departments. Computing machines were installed for use in calculating the totals of sales and purchases by departments.

The statistician studied each group of expenses and attempted to find an equitable basis for charging it to the merchandise

departments. Officers' salaries were charged directly as far as possible; the portion of this item of expense which could not be charged directly was apportioned on a basis of the ratios of departmental sales to total sales. Wages were charged directly to departments from the pay roll distribution sheet, and repairs were charged directly from the vouchers payable distribution book, where, among other expenditures, the amounts spent for repairs were listed. Depreciation was computed on a straight-line plan whereby, on the basis of estimated length of service, an equal proportion of the original cost of equipment and fixtures was charged to each year's expenses. The total annual amount of depreciation then was distributed to the departments on the basis of the percentage of the cost of the equipment and fixtures used in each department to the total cost.

Costs of insurance, taxes, and licenses were distributed on several bases: the liquor license was charged directly to the department which included liquors; the Federal and state capital stock taxes were charged to departments on the basis of the percentage of departmental sales to total company sales; automobile licenses were charged to delivery service, to be apportioned later; a monthly schedule of insurance premiums was drawn up and the monthly amount allocated to departments on the basis of total cost values of departmental inventories, equipment, and fixtures. Most of the expenses for miscellaneous supplies were charged directly to the departments; the remainder were distributed on a basis of the percentages of departmental sales to total sales.

A maintenance account was used for rent, as the company did not own the building which it occupied. The rental charge included repairs, depreciation, interest, and taxes on the building. The executives gave a value per square foot to each floor in accordance with their opinion of its value to the company. Rent was charged to the departments in accordance with the number of square feet of floor space occupied. Space on the first floor was valued at 85 cents a square foot, that in the cellar at 30 cents a square foot, that on the second floor at 80 cents, on the third floor at 50 cents, on the fourth floor at 40 cents, on the fifth floor at 33 cents, and on the sixth floor at 25 cents. All charges for heat, light, and power were accumulated into a total, which was distributed to the departments on the basis of floor space occupied.

Checking and packing expense was distributed on a basis of sales, weighted in accordance with the approximate time which was spent in checking and packing the merchandise from each department. For example, the pharmaceutical department arbitrarily was given a weight of 100%; on that basis, the proprietary medicine department was weighted at $66\frac{2}{3}\%$, crude drugs at 25%, sundries at 85%, and candy and cigars at 20%. The departmental sales then were multiplied by the respective percentages and the total checking and packing expense was distributed to the departments in accordance with the proportions which these weighted departmental sales bore to total weighted sales.

Receiving and shipping expenses and also office expenses were distributed on a basis of the ratios of departmental sales to total sales. The salaries and expenses of buyers who purchased for one department only were charged directly to the departments. Salaries and expenses of buyers who purchased for more than one department were allocated each month in accordance with percentages established by the executives on the basis of a survey of the buyer's work made at the end of the preceding year. Each year the percentages were to be revised. The general sales managers' salaries and expenses were apportioned in like manner.

Salesmen were paid commissions which ranged from $\frac{1}{2}$ of 1% to 6% on net sales. Each order was labeled with the salesman's name or initials at the time it was coded by the statistical department. The computing machine operators classified the salesmen's commissions by products. On a basis of those totals, salesmen's commissions were charged directly to the departments. Traveling expenses of salesmen were combined with the commissions and distributed on the same basis.

Advertising expense was apportioned to departments in ratio to sales. Merchandise was charged to departments at net cost. Usually all merchandise purchased by the company on one order was for the same department, so that the allocation of merchandise costs involved little splitting of bills. The difference between cash discounts received and given by the company as a whole was credited to the departments on the arbitrary basis of 1% of departmental net sales, except that in a few departments where the discounts received were exceptionally high, a larger percentage was used. A reserve for bad debts was kept on the

company's books, and the total debit to that account each month was charged to departments at a flat rate of $\frac{1}{4}$ of 1% of departmental net sales.

The difference between the actual amount of interest paid by the company and the amount of interest received from customers was distributed to departments on the basis of the proportion of the net investment of each department to the net investment of the company as a whole. The net investment for the company was the sum of the value of inventories, furniture, and fixtures, plus the amount of the difference between receivables and payables. The net investment of a department was the value of its inventory, furniture, and fixtures, plus such part of the total difference between receivables and payables as could be credited to the department on the basis of the ratio which the department's sales bore to total sales.

Interest was not added in with the other expenses before the operating profits for the departments were obtained. Miscellaneous income and expense, which included such items as income from investments, bonds, and stocks, and any unusual expense that could not be placed in any other expense account, were distributed to departments on the basis of the ratio of departmental sales to total sales. When interest and miscellaneous income and expense were subtracted from the net operating profits of each department, the final net profits or losses were obtained.

In order that a complete estimated profit and loss statement might be obtained by departments each month, the inventory values were departmentized and a gross margin for each department was estimated by study of the gross margins on a comprehensive list of items within the departments. The percentage of estimated gross margin to sales was, of course, the complement of the percentage of cost of goods sold to sales. On the basis of the latter percentage, monthly inventories were computed. When the system had been in use for six months, however, these estimated gross margins and cost of sales were replaced by actual cost of sales obtained at the time that the physical inventory was taken. At the end of the first year, the actual cost of sales for the entire year was obtained and used for the first six months of the following year, when it again was corrected by the physical inventory. The value of each departmental inventory at the end of the six months was subtracted from the sum of the

value of the inventory at the beginning of the six months and the purchases during the six months, to secure the actual cost of sales. Thereafter, at the end of each month the total of each department's purchases, inward freight, and interdepartmental transfers was added to the value of the department's inventory at the beginning of the month. The cost of goods sold for the base period, either the preceding six months or year, then was divided by sales for the same period. That gave the percentage of the cost of goods sold to sales for the base period. When sales for the month were multiplied by this percentage, the estimated cost of sales for the month was obtained. That figure was deducted from the value of the inventory at the beginning of the month, plus purchases, freight, and transfers, to get the estimated inventory for the end of the month.

At the end of the first six months, when the physical inventory was taken, it was found that the estimated inventories differed from the actual inventories by from 3% to 4%. The errors in estimated inventories might have resulted from mistakes in the departmental coding of purchases or sales; the buyers might have obtained gross margins greater or less than those of the period used as a base, or sales of merchandise with an extremely high or an extremely low margin might have been pushed. By reducing errors to a minimum, the company hoped to improve the accuracy of the inventory estimates. The company recognized that the physical inventories might not be absolutely correct, because of the numerous possibilities for errors in counting, valuing, and figuring amounts.

Each month the statistical department prepared estimated departmental net profit and loss statements for the use of the buyers. At the end of the first six months of the year, totals for the period were entered on the statements; at the end of the year, totals for the preceding six months and for the whole year were entered. The form used for these statements is shown as Exhibit 2.

A similar form was used for a monthly statement for the higher executives. That form, however, was wide enough to provide for entries for each department and for a complete profit and loss statement for the entire company. The president used that summary from month to month in controlling inventories, purchases, sales, expenses, and net profits.

OPERATING STATEMENT FOR DEPARTMENT NO.—OF THE TALCOT
WHOLESALE DRUG COMPANY

Ledger Account Number		Current Month*	Last 6 Months†	Last 12 Months‡
1,000	Sales, Gross.....			
1,900	Returns.....			
2,000	Allowances.....			
Total.....				
NET SALES.....				
2,100	Specialty Discounts.....			
2,200	Pharm. Rebate.....			
2,300	Freight on Sales.....			
Total Deductions.....				
Sales Less Deductions.....				
3,000	Trans. Credits.....			
GROSS INCOME.....				
4,000	Trans. Debits.....			
5,000	Purchases.....			
3,200	Transfers in Departments.....			
5,400	Inventory Transfers.....			
5,300	Freight on Purchases.....			
Total.....				
Inventory.....				
Total.....				
Inventory.....				
COST OF SALES.....				
GROSS PROFIT.....				
8,000	Salaries of Officers.....			
8,100	Wages.....			
8,200	Repairs.....			
8,300	Depreciation.....			
8,400	Insurance.....			
8,500	Supplies and Expense.....			
8,500B	Royalties.....			
8,600	Maintenance.....			
8,700	Heat, Light & Power.....			
8,800	Checking and Packing.....			
8,800B	Receiving and Shipping.....			
8,900	Office Expense.....			
9,000	Salaries of Sales Managers.....			
9,100	Salaries and Commissions of Salesmen...			
9,400	Discount.....			
9,500	Credit Losses.....			
Ser. Trans. Drs. and Crs.....				
TOTAL EXPENSE.....				
Balance of Profit.....				
9,900	Interest Charges.....			
Operating Profit or Loss.....				
9,800	Other Income.....			
NET PROFIT OR LOSS.....				

* Estimated.

† Filled in at end of first six months or at end of year.

‡ Filled in at end of year.

Exhibit 2: Departmental operating statement sheet of Talcot Wholesale Drug
Company.

After the departmental system had been in operation a year, difficulties arose in connection with the distribution of expenses. Some of the buyers objected to the basis used for distribution of rent and were not in agreement with the plan of charging higher rents to some floors than to others. The company, believing that such objections were to be expected from buyers whose departments were located on the higher rent floors, made no changes.

A more serious situation arose in connection with the distribution of checking and packing, receiving and shipping, and office expenses on a basis of actual and weighted sales. Under this method of distribution, departments which made large proportions of the total sales, whether because of aggressive sales efforts or the general demand for the products, were penalized by receiving the greater percentages of the total expenses, even though the actual expenses of those departments had not increased in proportion to sales increase. The company decided that distribution on the basis of actual or weighted sales was inequitable.

The executives and the buyers agreed that the distribution of checking and packing, receiving and shipping, and office expenses on the basis of percentages of actual or weighted departmental sales to total sales was to be considered equitable for the first year and one-half, since no great changes in the relationships of departments were likely to take place within that time. If, at the end of the year and one-half, a department's labor costs had not increased in equal proportion to the increase in the total labor costs of the company, the percentages of the three groups of expenses charged to that department would not be increased, even though the ratio of the department's sales to total sales had increased. After the year and one-half those expenses were to be distributed to the departments on the basis of the following formula: the average wages per month for the company as a whole for the one and one-half years are to the department's actual wages for the month in question as the percentage of the total expense account in question—either receiving and shipping, checking and packing, or office—charged to the department under the old system is to the new percentage to be used in calculating the portion of the total expense chargeable to the specific department. If the sales of a department decreased and the wages of the department did not decrease, the proportion of the total expenses of the three accounts borne by that department would

remain the same. Consequently, there was a stimulus for the buyers to keep expenses in their departments at a minimum. The revised basis of distribution was found to be entirely satisfactory.

Some question had arisen with reference to the allocation of salesmen's expenses, which were being distributed to departments on a basis of actual sales. Because certain products gave the salesmen higher percentages of commission than did others, some of the executives argued that those products should bear a correspondingly higher percentage of salesmen's traveling expense. Since records of salesmen's commissions were available by departments, the distribution of salesmen's expenses readily could be made on a basis of commissions paid by departments. However, the existent basis of actual sales was retained as being the most equitable.

The statistician believed that, instead of distributing the difference between discounts given and taken by the company to the departments on the basis of 1% of departmental net sales, it might be more equitable for the company to distribute the difference on the basis of the average differences between discounts received and given in departments.

The expense of the additional labor required to carry on the work of departmentization was not excessive. The actual additional cost incurred was estimated to be approximately \$7,000 a year. Installation of computing machines to be used in the calculation of departmental totals had made it possible to reduce the number of girls employed on that work from nine to four. The executives believed that the savings resulting from the merchandise control made possible by departmentization more than offset the extra expense incurred. The bases used for the distribution of expenses were considered sufficiently accurate to show the monthly departmental results.

The president recognized that the primary place for control was upon sales and that a great deal of the information needed to control sales could have been obtained had the company been departmentized only as to gross margins. The president, however, believed that for adequate control of sales, knowledge of departmental net profits was necessary. When a department failed to produce a satisfactory net profit, a special sales campaign could be introduced to increase sales in that department without proportionately increasing expenses.

Stock-turn was controlled through a study of the departmental inventories estimated at the end of each month. If the estimated inventory for a department was high, purchases were curtailed and sales emphasized. Departmentization enabled the executives to know exactly which departments were profitable and which were unprofitable. Losses on one group of products could not be covered up by unusual profits on others.

COMMENTARY: In the installation of control systems of accounts and statistics, the business executive must attempt to secure adequate information for the direction of future operations at reasonable cost. From both of these points of view, the decision of the Talcot Wholesale Drug Company to departmentize its accounts into seven groups is to be approved. While further information of value to the company in directing sales efforts might have been obtained from further subdivision, there was no assurance that the benefit to be procured from such additional information would have been sufficient to offset the additional cost. At any rate, the division into seven departments was a good starting point from which to determine the advantages of departmentization in actual operation.

The methods generally advanced by the accountant were in accordance with good accounting principles. While there are possible differences of opinion as to the allocation of certain expenses, no method is completely free from criticism. In any plan of departmentization, the direct allocation of such expenses as are incurred for particular departments is, of course, immediately called for; officers' salaries are allocated directly, so far as possible, wages likewise. Some objection may be raised to the arbitrary allocation of rent expense to various departments on the basis of varying square foot rentals. Handling and delivery costs are frequently less for the first floor than for other floors. Those products of which the sale is most rapid should obviously be in the most convenient locations.

A difficult problem connected with the plan adopted was that of estimating the monthly condition at the end of each month, on the basis of estimated inventories and gross margins. This plan was not dissimilar to that used for department stores, and though there would be variation between physical inventory and estimated inventories, the minor inaccuracy of such statements as were made at the end of each month probably was preferable to complete lack of knowledge of how various departments were operating. Practice and refinements of methods adopted, after the plan had been in operation for a while, would tend to reduce the variation of estimates from actual results and to make the plan work more successfully.

WARRION COMPANY¹

WHOLESALE—GROCERIES

MERCHANDISE CONTROL—*Installation of Perpetual Inventory System.* A wholesale grocery company recorded by departments its merchandise purchases and inventories, in dollars but not in quantities. A complete physical inventory was taken once a year. The buyer re-ordered merchandise whenever the clerk who inspected the stock each day reported that an item needed to be replenished; the size of orders was based on the buyer's past experience. In 1924, when the treasurer assumed the duties of buyer, he decided that a more accurate basis for determining size of orders and time of purchase was essential. He installed a perpetual inventory system which gave information as to the quantity of merchandise on hand and the rapidity of sales, and provided a monthly recapitulation of sales by quantities.

(1924)

The man who for nearly 25 years had made all the purchases for the Warrion Company, a wholesale grocery firm, retired from the company late in 1923, and the treasurer undertook the duties of buyer. The former buyer had had no records upon which to base the size or frequency of purchases. In January, 1924, the treasurer endeavored to devise a system of records suitable for use in controlling the size and frequency of orders.

The Warrion Company sold medium-price and high-price merchandise. From 50% to 60% of total sales were of goods which the company sold under its private brand, Capitol. The company sold no perishable merchandise and did no manufacturing or coffee roasting. Annual sales for several years had averaged nearly \$1,500,000.

The company purchased from manufacturers except occasionally, when, in order to accommodate a customer, it placed a small order with a broker. The company did not purchase large quantities of merchandise on the possibility of realizing speculative profits from rising prices. In order that the canned goods sold under its brand should be of high and uniform quality, however, the company ordinarily purchased a year's supply of those items in the fall from canners with reputations for high-

¹ Fictitious name.

grade products. The company contracted for futures in all the canned goods which it sold.

The Warrion Company employed 12 salesmen, to whom it paid salaries and not commissions. The duties of sales manager were included with those of the buyer. The company had about 1,000 customers, all located within 65 miles of its office. The company trained its salesmen to instruct retailers in sound methods of accounting, advertising, and merchandising. The salesmen called on each customer once a week. To those towns in which the customers were so numerous that one salesman could not call on them all in one day, the company sent more than one salesman. The company made deliveries in its own trucks on the day following a salesman's solicitation. About 15% of sales were of broken cases, most of which the company sold to small grocery stores in the town in which it was located.

The treasurer of the Warrion Company supervised all records which the company maintained. He devised new records as sales increased and additional information became necessary. In 1914 he had commenced to divide into departments the records of merchandise inventories and purchases, which were kept in dollars. There had been only a few departments at first, but as the company had introduced new products, the number had increased until in January, 1924, there were 31. Since records of inventories and purchases were departmentized, it was possible to compute the rate of stock-turn in each department and so to ascertain the commodities which moved slowly. The company had made no attempt to departmentize sales or expenses. It computed the annual stock-turn of each department by dividing the total annual purchases at cost, minus cash discounts received, by the average of the inventories at the beginning and the end of the year.²

Prior to 1924, the only record which the company had maintained of the quantity of merchandise purchased or of the quantity on hand, was that of the physical inventory taken on January 1 of each year. It had been difficult, therefore, for the company

² The treasurer of the company recognized that he could obtain a more nearly correct figure for stock-turn by adding the purchases at cost, minus the total of cash discounts and returns and allowances received on purchases, to the inventory at the beginning of the year, subtracting from the sum thus obtained the inventory at the end of the year and dividing this result, the net cost of merchandise sold during the year, by the average of the inventories at the beginning and the end of the year. The treasurer believed, however, that the method which he used was sufficiently accurate for purposes of comparison.

to ascertain whether merchandise had been stolen and to trace mistakes made in filling orders and in billing merchandise.

The Warrion Company occupied a four-story building. The only heated floor was the first, where were stored ketchup, vinegar, and other goods which could be injured by freezing. On the second floor were beans, flour, and other heavy, dry, bulk merchandise. On the third floor were cereals, and on the fourth floor, canned goods.

Merchandise was assembled for delivery as follows: Each morning a clerk familiar with the location of the various items of merchandise was given all the orders taken by the salesmen on the previous day. This clerk sorted the salesmen's order blanks according to towns. He then listed the quantities of merchandise to be shipped, using a separate sheet for each town. The sheets were made out in duplicate and each sheet was given an identification number. A sheet had four sections, in each of which the clerk entered the orders to be filled from one floor. The duplicate sheet was perforated so that the four sections could be separated. Each section was sent to the floor man on the floor where were stocked the items entered on that section. The floor man selected the merchandise ordered and placed it upon a conveyor which carried it to the loading platform. The conveyor system was so constructed that the merchandise for each town was kept separate from that for other towns. A special stock requisition blank was filled out for the orders of retail merchants who called at the company's offices for the merchandise. Another form was filled out for each article returned by a customer.

The company had had in its employ for about 25 years a clerk who each day inspected the stock and reported to the buyer the merchandise which, in the clerk's opinion, needed to be replenished. The buyer had determined the time to order entirely on the basis of these reports and had fixed the size of the orders on the basis of his own experience. The clerk seldom had advised the buyer to purchase too soon so that excess stocks were accumulated. On the contrary, the clerk frequently had misjudged the time required for the delivery of orders, with the result that the company's stocks of some items often were exhausted. Each morning the floor men had crossed off from 15 to 25 items on the order sheets which were sent to them, signifying that those items were not in stock.

When the treasurer assumed the duties of buyer, he decided that a more accurate basis for determining the size of orders and the time for purchasing was essential. Representatives of companies which installed systems of perpetual inventories often had asked to be allowed to install their systems for the Warrion Company. The Warrion Company had not accepted the offer of any of these companies, because the systems required a large amount of clerical work, and because the companies charged from \$12,000 to \$16,000 for an installation. The treasurer undertook to devise an inventory system which could be operated with little clerical help.

The system which the treasurer adopted and operated during 1924 involved the use of sheets similar to Exhibit 1. Such a sheet was to be filled out for each item which the company stocked.

ARTICLE		DEPT.								
(1) Received	(2) C/S	Monthly Sales					Daily Sales*			
		(3)	(4) 1925	(5) 1926	(6) 1927	(7) 1928	(12) Date & Sheet	(13) C/S	(14) Date & Sheet	(15) C/S
DATE Stock—Jan. 1 Ord 1/10 30 Rec 1/20 Total Bal. Ord 3/9 15 Rec 3/24	No. of Cases 50 30 80 13 <hr/> 67 15	Jan. Feb. Mar. Apr. May June July Aug. Sept. Oct. Nov. Dec.	13							
		Orders (8)	(9)	Date & Sheet (10)	C/S (11)					
	DATE 3/R9 F9	No. of Cases /// +++ /								
		13								

* Actual form had three more of these double columns; columns 1, 2, and 8 to 15 inclusive were repeated on the reverse of the sheet.

Note: Numbers in parentheses did not appear on form used by company.

Exhibit 1: Perpetual inventory record sheet of Warrion Company.

In column 1 were placed the dates upon which merchandise was ordered and the quantities ordered. When the merchandise was received, the date of receipt was entered in that column, directly after the notation of the order; the quantity received was recorded in Column 2. The clerk who kept the perpetual inventory records thus had a record of the orders which had been placed, the time elapsing between the placing of an order and receipt of the merchandise, and the quantity of merchandise received. The information concerning orders placed was compiled by the perpetual inventory clerk from carbon copies of requisitions of the orders sent to manufacturers; the record of merchandise received was copied from the loose-leaf receiving book, in which receipts of merchandise were entered by the receiving clerk.

On the first line in Column 2 was placed the number of cases of the item which the company had in stock when the sheet first was filled out. On the following lines were entered the number of cases received in succeeding shipments. At the end of each month, the total number of cases sold was subtracted from the sum of the cases received and those in stock at the beginning of the month to obtain the balance on hand. Columns 3 to 7 contained sufficient space for the notation of monthly sales by quantities for five years and provided a comparative monthly recapitulation of sales for that period.

In Column 8 and the succeeding even numbered columns were placed the identification numbers of the sheets compiled each day from the salesmen's order blanks for the previous day, notations which showed for each sale whether it was made upon a special requisition or upon a salesman's order blank, and the date of each sale. In Column 9 and the succeeding odd numbered columns were placed tallies representing the number of cases, crates, sacks, or barrels shipped and the date of shipment. At the end of each month, the tallies representing cases shipped were counted and the total was entered in red ink immediately after the last entry for the month. The total also was placed in Column 4, 5, 6, or 7 opposite the month to which it applied. The information needed for the daily sales columns was obtained from the floor sheets which had been used by the floor men in filling the orders and from the special stock requisition blanks and the forms used for returned goods.

In compiling the perpetual inventory records from day to day, the clerk observed from Column 2 on each sheet the latest

balance of merchandise on hand, from Column 1, the quantity ordered to date, and from the daily sales columns, the number of cases sold to date; on the basis of this information he notified the treasurer when to reorder.

The clerk's notification to the treasurer was made upon a form, known as an Order Sheet, which gave the quantity of goods on hand; the sales by quantities in each of the two months following that month in the previous year which corresponded to the current month; the sales of the preceding month in the current year; the sales to date in the current month; and the quantity of the latest order and the date of its receipt. A sample order sheet is shown here as Exhibit 2.

ORDER SHEET—APRIL 30, 1925

Article	Stock on Hand	Sale May, 1924	Sale June, 1924	Sale March, 1925	Sale Current Month	Last Order
Strawberry Gelatine.	15*	30	13	30	24	3/31/25—20

* Figures represent quantities.

Exhibit 2: Sample order sheet of Warrion Company.

The rates of stock-turn obtained by the Warrion Company in 1922, 1923, and 1924, together with comparative figures for the wholesale grocery trade, are shown in Exhibit 3.

EXHIBIT 3

RATES OF STOCK-TURN OF WARRION COMPANY COMPARED WITH
SELECTED COMMON FIGURES IN THE WHOLESALE GROCERY TRADE,
1922, 1923, 1924*

Year	STOCK-TURN (Times a year)		
	Warrion Company (Sales, \$1,000,000— \$1,990,000)	Common Figures for Firms with Volume of Sales \$1,000,000— \$1,999,000	Common Figures for All Firms Reporting
1922	5.9	5.4	5.7
1923	5.7	5.8	5.9
1924	5.3	...†	...†

* Trade figures taken from Bulletin No. 34, pp. 26 and 28, and Bulletin No. 40, pp. 11 and 22, Bureau of Business Research, Harvard University.

† 1924 figures for trade not available.

The rate of stock-turn and the cost of sales of the Warrion Company, by departments, for the years 1922, 1923, and 1924 are given in Exhibit 4.

EXHIBIT 4

RATE OF STOCK-TURN AND COST OF MERCHANDISE OF THE WARRION COMPANY, BY DEPARTMENTS, 1922, 1923, AND 1924

DEPARTMENT	STOCK-TURN* (Times a Year)			COST OF SALES		
	1922	1923	1924	1922	1923	1924
Package Cereals.....	7.3	7.2	8.6	\$ 49,709	\$ 51,545	\$ 54,506
Bulk Cereals.....	4.6	5.4	5.5	5,773	5,871	15,536
Soap & Cleansers.....	9.1	9.4	6.6	49,619	52,852	52,733
Spices.....	9.4	8.1	7.5	22,201	21,011	21,203
Starch.....	9.7	10.1	7.6	5,404	5,416	4,927
Dried Fruits.....	3.3	3.3	2.7	41,035	29,636	22,677
Canned Meat.....	10.5	11.3	8.2	24,526	27,406	28,444
" Fish.....	2.6	2.3	2.3	56,559	68,895	72,493
" Fruits.....	1.9	1.8	1.4	38,448	48,082	47,503
" Vegetables.....	2.3	2.1	2.0	87,877	105,548	118,326
" Milk.....	11.0	11.3	12.2	60,529	62,940	59,676
Extracts.....	7.0	7.6	7.6	16,154	14,866	14,927
Beverages.....	9.1	8.5	7.3	34,495	36,311	31,689
Flour.....	9.6	10.8	13.4	157,426	145,965	150,506
Sugar.....	152.8	109.8	105.8	119,935	192,017	208,464
Salt.....	7.3	6.2	5.7	15,297	12,899	12,747
Gelatines & Pie Fillings.....	7.5	7.2	9.2	10,917	9,234	12,060
Jams & Jellies.....	7.2	5.8	6.9	9,034	8,346	11,475
Pickles & Relishes.....	7.5	5.1	2.9	15,945	30,044	37,765
Salad Dressings, Oils & Peanut Butter.....	7.5	13.1	9.3	25,636	26,291	27,570
Bluing & Polishes.....	4.9	4.8	4.9	7,139	7,486	6,866
Dried Beans & Peas.....	8.1	9.2	9.6	29,670	30,234	33,107
Matches.....	4.9	5.1	3.6	15,420	18,347	13,223
Molasses & Syrups.....	9.5	7.2	6.5	16,735	17,953	19,952
Macaroni.....	9.3	9.2	8.8	7,926	9,449	11,567
Rice.....	5.3	1.9	....†	5,521	3,528†
Cocoa, Chocolate, Coffee & Tea	14.7	....	10.7	30,598	.....	40,693
Soup.....	4.7	4.5	4.0	21,838	25,328	26,556
Paper & Twine.....	5.4	2.7	4.4	11,340	8,149	12,802
Vinegar.....	5.4	3.9	....†	8,546	7,472†
Medicine.....	7.4	6.7	5.6	19,552	16,258	16,051
Miscellaneous.....	6.8	10.6	6.0	24,980	30,210	12,095
Nuts.....	5.9	3.3	6.4	9,917	8,592	15,091
Chimneys.....	4.4	....	....†	1,203	.....	.....†

* Stock-turn in this table was computed by adding net purchases to the inventory at the beginning of the year, subtracting from that total the inventory at the end of the year, and dividing the remainder by the average of the beginning and ending inventories.

† Combined with other departments in 1924.

The stock-turn of the company had decreased from 5.7 times in 1923 to 5.3 times in 1924. The treasurer attributed this decrease partly to the fact that each year the company was placing more sales effort upon merchandise which was sold under its private brand, and which was consequently purchased in large quantities, and less upon merchandise sold under manufacturers' brands. In 1924, for example, the company had purchased seven commodities in carload lots for the first time. These commodities were canned meat, pickles, canned milk, matches, prunes, soap, and soup. The company's rate of stock-turn on all those commodities, except canned milk, was less in 1924 than in 1923. Sales of canned milk had been abnormally large. The treasurer attributed the decrease in stock-turn also to the fact that the added control provided by the inventory system had resulted in more timely ordering and consequently in fewer instances of exhausted stocks. While on each day during 1923 from 15 to 25 items had not been in stock, on each day during 1924 only 2 or 3 items had not been in stock. The treasurer was convinced that without the information which the perpetual inventory records supplied as to the correct size of orders to place, the company, because of the increased sales effort which it had placed on its private brand merchandise, would not have obtained a stock-turn even so high as 5.3 times in 1924.

Beginning January 1, 1925, the treasurer had added to the report sent him by the clerk who kept the perpetual inventory record the monthly sales of each item in that year and the previous year's sales for the months corresponding to the current month and to the two months preceding the current month. Since this information furnished a basis for judging the trend of sales over a long period, the treasurer believed that he would be able to control purchases even more effectively in 1925 than in 1924.

During the first week of March, 1925, the treasurer carefully examined the perpetual inventory records. By studying the monthly recapitulation of sales and the amounts of stock on hand, he determined which items had moved slowly. Upon the basis of this information he discontinued seven articles. He planned to discontinue other items as information for a longer period became available.

A further advantage which the Warrion Company had experienced from use of the perpetual inventory records was the

increased care which the employees in the warehouse had taken to avoid inaccuracies in billing and filling orders. Prior to January, 1924, the company had given little attention to such inaccuracies. Truck men frequently obtained from the stock rooms merchandise which was needed to fill orders and which, through error, had not been placed on the loading platform. Following January, 1924, however, since records of the physical quantity of merchandise on hand were being maintained in the office, the stock clerks were careful to place on the conveyor the exact quantity of merchandise which was designated on the sheets sent to them. The stock clerks, furthermore, objected if the truck men took merchandise from stock. The stock clerks' feeling on this matter had become so intense that the company had painted a white line across the loading platform to separate merchandise ready to be shipped from merchandise in stock. The men loading the trucks were not allowed to cross the line to obtain merchandise. If, after every truck had been loaded and the merchandise checked with the salesmen's order blanks, any article remained on the platform, it was necessary to determine whether too much merchandise had been sent down on the conveyor, or if some order had not been filled correctly.

It had been the company's experience during 1924 that the time of one clerk was required to keep the records of the perpetual inventory up to date. This clerk also frequently visited the warehouse to compare the book inventory with the actual inventory. The company found, upon taking the physical inventory on January 1, 1925, that the discrepancy between the perpetual inventory record and the physical inventory was seldom more than one case for any item. Frequently in the record one error offset another. For example, the physical inventory contained one case more of one kind of soup than was shown in the inventory record and one case less of another kind, indicating that an error had been made during the year in listing the sales on the inventory records.

The perpetual inventory records had increased the interest of company officials in the question of stock-turn and had led them to study the records frequently in order to determine the causes of excessive stocks. For example, when the stock-turn of salad dressing, oils, and peanut butter decreased from 13.1 times to 9.3 times, the officials had investigated to discover the cause

of the decrease. They found that a large order of salad dressing which had been sold in 1924 had been returned by the retail purchaser previous to January 1, 1925, because the merchandise had spoiled; as this returned merchandise had been listed in the January 1 inventory, the average inventory for the year 1924 had shown an increase.

COMMENTARY: The decision of the Warrion Company to devise a more accurate basis for the size of orders at the time of re-purchase was sound. Many times the dependence of a company on the personal knowledge and judgment of a single buyer has been demonstrated to be weak.³ It may be noted also that in this case the departmentization policy evidently was entirely satisfactory, since the practice which was established in 1914 had continued and expanded since that time. Thus it was possible for the company to compute stock-turn, department by department, and to detect the slow- and rapid-moving items. By way of contrast, the experience of the Sneed Company⁴ is of interest. That company, with sales of substantially the same volume as that of the Warrion Company, abandoned departmentization on the ground that enough use was not made of the information that was rendered available to compensate for the added cost. It may also be noted that the annual physical inventory made by the Warrion Company was not adequate as a means of close stock control, prevention of theft, and the checking of orders filled.

The method of determining stock-turn, though not strictly accurate, does not seem to have resulted in any serious error. The stock-turn computed by the Warrion method is at times somewhat higher than that computed in the usual manner, but the difference is not great.

The stock record system was not unduly complicated and was evidently satisfactory, as it rendered possible the elimination of certain slow-moving items. The previous experience of the company with "cross-offs" also indicates the value of this method of merchandise control. The close agreement of the book inventory with the figures secured by physical inventory is interesting. The fact that the time of but one additional clerk was required to keep the perpetual inventory records suggests that the expense was small compared to the value of the records.

The lower stock-turn on private brands is, of course, not unusual. It is probable that with loose merchandise control the decrease would have been still greater. The additional sales emphasis placed on private brand merchandise also helped to maintain its rate of stock-turn.

³ See page 414.

⁴ See 3 H. B. R. 235.

The Warrion Company's experience in this connection may be contrasted with that of the Thoreau Company.⁵ In the latter instance, adequate merchandise control, combined with special sales stress, resulted in a rate of stock-turn on private brands that exceeded that of national brands. It is not impossible that the same result might ultimately be achieved by the Warrion Company.

The case serves as an excellent illustration of a successful experience in departmentization and merchandise control. The results appear to have been in every particular satisfactory.

October, 1927

H. T. L.

⁵ See Thoreau Company, page 231.

HARCOURT COMPANY¹

WHOLESALE—GROCERIES

MERCHANDISE CONTROL—*Installation of Stock Records.* The president of a wholesale grocery company which had annual sales of more than \$750,000 concluded that records of stocks and orders were essential for adequate control of merchandise purchases and sales. For this purpose, the company decided to use stock record sheets which provided for weekly entries, by items, of quantities of merchandise instock and quantities ordered. The stock records provided the buyer with readily available information, by items, as to the time required for deliveries, rapidity of sales, and inactive stocks. As a result of use of the records, the buyer disposed of slow-moving merchandise, purchased in smaller quantities than before, and was less frequently without items requested by customers than formerly, when he had purchased simply on a basis of his memory of past experiences.

(1924)

Although the Harcourt Company, a wholesale grocery firm, had maintained no stock records prior to 1924, it had obtained an annual stock-turn of about 9 times. The president concluded, however, that for adequate control of merchandise purchases and sales, records of stocks and orders were essential.

Annual sales of the Harcourt Company for several years prior to 1924 had been between \$750,000 and \$1,000,000. Gross margin had averaged about 10% of net sales; and net profit, before deduction of interest on owned capital, had been about 1½%. The merchandise which the company sold was medium-price and high-price; only a small portion of sales was of merchandise under the company's brand. The company's five salesmen made most of their sales in the city in which the company was located. Sales of sugar constituted from 15% to 30% of total sales. The company did not divide its merchandise purchases, inventories, or sales by departments nor attempt to allocate expenses to the sales of specific products.

The Harcourt Company never had maintained a system of stock or purchase records. The company's stock men who assem-

¹ Fictitious name.

bled the merchandise to fill orders notified the buyer when they found that the stock of any item was low. The buyer then ordered a supply of the merchandise, usually basing the quantity of his purchase upon his memory of past sales of the item. If he wished, however, the buyer could determine from the manufacturer's latest invoice the quantity of the previous order and the date of its arrival.

The company did not find this method of stock control satisfactory. The buyer did not have readily available information about the rapidity of sale of an item or the length of time a quantity was held in stock. Moreover, he was not informed of merchandise which was in stock and for which there was no sale. The stock men sometimes were lax in notifying the buyer when inventories were low. Consequently, the company occasionally was unable to fill customers' orders. The president decided, in September, 1924, to install a system of stock record sheets similar to the sheet shown as Exhibit 1. That sheet provided for weekly entries, by items, of quantities of merchandise in stock and quantities ordered.

These stock sheets, however, were not to be used for the recording of the annual inventories. For that purpose, a book was provided; in the book would be entered the purchase price and inward freight charges of the merchandise in stock and of that ready for shipment to the company's customers.

In column 1 of each stock sheet, shown as Exhibit 1, were listed the names of 22 items. All items purchased from one manufacturer were grouped together upon successive lines in the column. Records for similar articles produced by different manufacturers were placed upon the same sheet when possible. In column 2 was recorded the unit size of each item, and in column 3, its unit cost. Columns 4 and 5 were for entries of the quantities of merchandise in stock in January and July. In column 6 and the succeeding columns were entered, on line B, the quantities of merchandise in stock upon the dates indicated at the tops of the columns. On line A of each column were noted by items the orders which the Harcourt Company had placed with manufacturers during the preceding week.

The merchandise was so arranged in the company's three-story warehouse that stock men easily could take the physical inventory in the order in which the items were listed upon the stock

Inventory

[illegible]

* Sheet had spaces for 22 items.

† Column numbers were not on actual sheet.

† This column was not always used.

† This column was not always used.
‡ Sheet was doubled and provided for 12 months.

Exhibit 1: Stock sheet of Harcourt Company.

records. The second and third floors of the warehouse each were divided into two sections; the first floor had only one section. The stock records were divided into five groups, corresponding to the five divisions of the warehouse. A different stock man had charge of each group of merchandise.

From the new stock record sheets the company was able to ascertain the approximate dates when the buyer ordered merchandise and also the approximate time elapsing between the placing of an order and the arrival of the merchandise. For example, if the record sheet showed that the buyer had placed an order on July 7 for 50 cases of an item and did not show a corresponding increase in the quantity of merchandise in stock until the week prior to August 25, it was evident that the total order had arrived about 7 weeks after it was ordered. The company also could compute the sales of any article in any month or period of months by adding to the inventory at the beginning of the period the merchandise received during the period and subtracting from that total the merchandise on hand at the end of the period. The record also made available information as to the rapidity of sale. From a study of this information the company could ascertain, for example, whether it was advisable to purchase in five-case lots or in ten-case lots.

The stock record, moreover, provided data regarding inactive stock. For example, when the company started to keep the record in September, 1924, it had in stock 20 cases of one brand of ketchup. On February 16, the record showed that the 20 cases still were in stock. The company accordingly reduced the price sufficiently to sell the entire quantity by March 9. Three cases of mustard which had been in stock on September 27 still were in stock on February 16. The company also reduced the price of this item sufficiently to sell it. The company had similar experiences with 10 cases of cocoa and 8 cases of soap.

In another instance, the company had stocked an item in five sizes. On September 22, 1923, the inventory, in cases, for each of the sizes was respectively 5, 4, 5, 13, and 4. Late in February, 1925, the inventories were 5, 4, 5, 11, and 4 cases respectively. The company discontinued purchasing this item and sold the entire stock of the item at reduced prices. The president of the company stated that, under the method of stock control formerly used, this type of information would not have

been available, so that the inactive merchandise probably would have remained in stock.

Because of the information which the stock records made available regarding the rapidity of sale and the length of time required for delivery, the company was able to purchase merchandise in smaller quantities than formerly. This was true also of pool purchases. The Harcourt Company often joined with other wholesale grocery companies in the purchase of those commodities on which carload discounts were offered and which the company did not find it advantageous to buy in carload lots. For example, early in December, 1924, the company had in stock 25 cases of one brand of canned milk which it had purchased in a pool car. The company did not sell the 25 cases until late in the following February. At that time the next pool order had not yet been made up and the company placed an order independently. On the basis of the rate of sales shown by the stock record, the company decided that five cases would be sufficient until it joined in the next pool car order.

In another instance of pool buying the company ordered 350 cases of a commodity in order to complete the carload order. The company placed that order on October 13, and at that time had 282 cases of the commodity in stock. Six weeks was the usual time required for the delivery of pool orders, although the time varied according to the make-up of the cars and was not controllable by any participant in the pool. On December 1, the company had 350 cases of the item in stock; thus its sales in the period from October 13 to December 1 had averaged 40 cases weekly. Between December 1, 1924, and February 2, 1925, the company sold 346 cases of the commodity, an average weekly sale of about 38 cases. When the buyer was to order again early in February, the commitments of the other wholesale grocery firms were large enough so that it was not necessary for the Harcourt Company to order so many cases as previously. He, therefore, ordered only 225 cases. This quantity was slightly less than the average requirements for six weeks' sales. The company expected sales of the commodity to decrease in April because demand was seasonal. At that time, another pool order was being made up, and the company decided to order 175 cases only, as that quantity was sufficient to complete a carload. The

Harcourt Company obtained the same carload concessions on the smaller purchases as on the larger.

Use of the new stock record enabled the company to reduce materially the number of times that it did not have merchandise in stock to fill orders. The company lacked an item only when deliveries by manufacturers were delayed unexpectedly or when the buyer had given insufficient attention to the stock record.

It was the company's experience that three-fourths of an hour was required every Monday morning by each of the five stock men to count the quantity of merchandise in stock. The cost value of the company's average inventory was \$75,000 after the introduction of the stock records.

COMMENTARY: This case furnishes another good illustration of the inadequacy, for a buyer, of relying upon individual judgment unsupported by adequate data. The experience of the Harcourt Company in this matter is quite parallel to that of other companies of similar size.²

The records which were devised were extremely helpful as far as they went. They constituted a very real advance over the condition existing previous to their installation. The company derived a considerable measure of usable data relative to slow-moving items and other pertinent information.

There is little evidence in the context of the case as to supporting records if any. Consequently, any conclusions drawn must be based on the merits of these stock records, irrespective of any other information available to the buyer. Judged on this basis, it would appear that there was not adequate provision for summarizing the data in the most usable form. Nor does it appear what test, or tests, for determining the standards were followed. A further weakness arises because each year was apparently judged largely by itself. Comparisons with other years undoubtedly could be made, but evidently only at some expense and trouble.

It would appear, therefore, that, although the policy adopted was extremely helpful and did constitute a real advance over the previous situation, it was not one which yielded the largest measure of benefit. Summaries, standards, and comparisons with other years are all essential to the permanent success of any well rounded plan for merchandise control.

October, 1927

H. T. L.

² See page 407.

EVANSTON COMPANY¹

WHOLESALE—GROCERIES

MERCHANDISING—*Simplification of Line to Increase Rate of Stock-turn.*

Because he wished to increase the rate of stock-turn in the general groceries department, the buyer of that department in a wholesale grocery company planned to analyze the inventories, purchases, and sales of the products in each line sold. As a result of his analysis of the 23 items of a nationally advertised line carried by the department, the buyer decided to eliminate five slow-moving items of the line.

PURCHASING—*Reduction in Size of Purchase to Increase Rate of Stock-turn.*

Because he wished to increase the rate of stock-turn in the general groceries department, the buyer of that department in a wholesale grocery company planned to analyze the inventories, purchases, and sales of the products in each line sold. As a result of his analysis of the 23 items of a nationally advertised line carried by the department, after eliminating five slow-moving items of the line, the buyer decided to purchase the remaining items in smaller quantities.

(1925)

In 1924, the general groceries department of the Evanston Company obtained a stock-turn of 4.8 times. As that department did not sell canned goods or dried fruit, items which usually were slow-moving, the buyer for the department, in March, 1925, concluded that it was possible to increase the department's rate of stock-turn. He planned to analyze the inventories, purchases, and sales of the products in each line which the department sold, with a view to determining whether he should discontinue any items and whether he should purchase any in smaller quantities than he was then ordering.

The Evanston Company, a wholesale grocery firm, was located in a southeastern city with a population of 70,000. The company's salesmen called upon customers within a radius of 175 miles of the city. Annual sales were about \$2,000,000, 30% of which consisted of merchandise of the best quality obtainable, which the company sold under its private brand. In order to insure a supply of the products sold under its private brand, the

¹ Fictitious name.

HARVARD BUSINESS REPORTS

EXHIBIT I

EVANSTON COMPANY'S STOCKS AND PURCHASES OF KRISPIN BRAND PRODUCTS, BY ITEMS, DECEMBER 31, 1923 THROUGH MARCH 3, 1925*

Krispin Brand Item	1923	1924													
	12/31	1/22	2/10	2/21	3/3	3/18	3/21	4/7	4/22	5/12	5/26	6/2	6/17	7/8	
1	23	<u>25</u> 9	5	1	....	<u>35</u> 31	11	15	58	56	44	<u>38</u> 100	<u>42</u> 100	<u>25</u> 32 100
2	198	189	176	164	<u>155</u> 50	139	<u>102</u> 50	93	<u>68</u> 50	60	36	39	17	<u>3</u> 100	
3	192	149	152	132	77	29	11	....	38	74	<u>61</u> 5	104	<u>84</u> 15	<u>56</u>
4	....	<u>100</u>	<u>25</u> 100	....	....	<u>100</u>	....	....	....	....	0	....	0	....
5	<u>48</u> 100	<u>33</u> 25	<u>23</u> 50	17	10	3	23	<u>18</u> 200	108	94	275	223	253	227	
6	22	2	7	100	....	8	22	9	15	89	333	367	345	<u>298</u> 10
7	9	8	8	8	8	8	6	6	6	5	5	5	4	<u>1</u> 5	
8	2	2	2	2	2	2	2	2	2	2	2	2	2	0	
9	....	....	....	....	....	....	....	....	....	....	0	....	0	....
10	<u>25</u> 24	17	<u>35</u> 10	30	28	<u>21</u> 15	20	16	10	....	....	23	18	<u>7</u> 15
11	11	11	6	3	3	0	6	6	21	<u>21</u> 5	12	12	10	6	
12	4	4	4	4	4	4	4	4	4	4	2	5	5	5	
13	16	12	7	7	....	<u>5</u>	....	....	....	<u>5</u>	....	....	....	<u>5</u>
14	4	3	<u>1</u> 1	1	<u>1</u> 1	<u>0</u> 1	....	....	5	<u>4</u> 5	4	2	6	4
15	3	1	0	1	0	0	1	1	....	0	....	5	5	<u>3</u> 15
16	32	26	22	18	12	12	10	8	4	....	....	9	<u>5</u> 10	<u>2</u> 40
17	144	130	113	105	96	87	81	<u>73</u> 15	33	26	16	9	0	0	
18	2	2	2	1	1	1	<u>3</u> 5	0	16	10	....	....	....	3
19	....	....	....	....	....	....	0	....	....	....	....	....	....	0
20	8	8	8	....	5	5	4	<u>3</u> 5	1	....	....	....	....	....
21	....	....	....	....	....	....	....	0	5	2	1	<u>1</u> 10	1	<u>....</u> 25
22	<u>32</u>	<u>16</u>	15	13	9	<u>7</u> 25	<u>26</u> 25	21	38	33	29	<u>25</u> 25	22	<u>26</u> 100	
23	53	42	44	43	34	20	8	3	25	42	36	29	25	15	

* Entries are in terms of cases.

Numbers above dash are quantities ordered.

Numbers below dash are quantities in stock.

Returned merchandise shows only through increase in inventories.

EVANSTON COMPANY

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EXHIBIT I (Continued)

Krispin Brand Item	1924									1925				
	7/28	8/21	9/22	10/18	11/6	11/24	12/9	12/18	12/31	1/13	1/26	2/6	2/16	3/3
1	28	<u>25</u> 23	31	42	<u>40</u> 300	39	<u>35</u> 29	21	19	53	<u>50</u> 57 100	32	22	19
2	87 75	<u>73</u> 210	140	121	106	98	<u>82</u> 100	374	344	262	<u>210</u> 100	193 53	178 25	162 100
3	9	<u>58</u>	14	328	183	148	<u>119</u>	110	94 5	134	<u>110</u>	20	7	0
4	3	10	6	2	2	1	....	1	0	....	1	....	5	5
5	209	118	124	<u>88</u> 50	88	<u>87</u> 50	84	78	<u>77</u> 50	72	<u>64</u> 100	57	53	<u>41</u> 100
6	262	203	141	<u>55</u>	22	<u>7</u>	84	44	<u>29</u>	47	<u>34</u>	22	94	<u>66</u>
7	1	11	10	10	10	10	10	10	10	10	10	10	10	19
8	....	5	5	5	5	5	5	5	<u>5</u> 5	5	5	5	4	3
9	<u>3</u> 15	<u>9</u> 25	5	2	0	<u>0</u> 25	0	0	....	....	....	....	5	5
10	<u>1</u> 10	<u>20</u> 10	1	30	21	<u>11</u>	....	....	25	<u>15</u>	<u>50</u> 10	....	....	24
11	2	<u>12</u>	9	34	33	32	29	26	26	25	<u>25</u> 5	22	21	<u>19</u>
12	5	5	4	4	4	4	4	1	1	1	<u>0</u>	....	....	....
13	....	....	<u>5</u>	....	....	<u>5</u>	....	....	....	....	<u>5</u>	....	....	....
14	5	<u>8</u> 5	<u>6</u> 5	3	1	<u>0</u> 5	....	5	5	5	2	1	....	....
15	....	<u>5</u> 10	<u>4</u> 10	....	....	<u>0</u>	....	3	8	<u>5</u> 10	4	4	3	2
16	....	<u>12</u> 100	<u>1</u>	0	10	7	22	14	13	<u>8</u> 100	6	1	1	10
17	2	<u>12</u>	....	96	82	68	62	60	55	<u>33</u>	18	8	6	102
18	....	....	4	....	....	....	....	2	2	1	1	....	1	1
19	....	0	....	....	....	....	....	5	5	1	1	1	1	1
20	....	....	....	....	....	....	....	....	....	....	....	....	....	....
21	....	....	....	....	....	....	....	....	....	....	....	....	....	....
22	15	<u>25</u> 1	8	<u>50</u> 23	....	<u>25</u> 75	<u>25</u>	48	67	<u>50</u> 69 50	<u>35</u> 51 100	20	14	<u>65</u> 78
23	27	32	80	<u>47</u>	27	<u>10</u>	....	68	120	<u>108</u>	93	57	38	78

company purchased them in larger quantities than it did other items. They, consequently, had a low rate of stock-turn. In order to offset the low stock-turn on its privately branded merchandise, the company sought to obtain a high rate of stock-turn upon nationally advertised staple products.

The Evanston Company maintained two sets of records from which the buyers determined the quantities to buy and the dates upon which to purchase. One, an order record, provided for each item a card upon which were recorded the quantities ordered and the dates of the orders. If the merchandise was not to be delivered soon after it was ordered, the probable date of arrival usually was placed on the card also. The information upon this card was obtained from manufacturers' invoices and from requisition forms.

The other records, the ones most commonly used, were stock sheets upon which were recorded the physical inventory of each item at intervals of about two weeks and the quantities ordered of each item. The quantity ordered was entered over the figure for the physical inventory in the column dated nearest to the time when the order was placed. Ordinarily, similar articles produced by several manufacturers were grouped together, by manufacturers, and entered on the same stock sheet.

One of the first lines of merchandise which the general groceries buyer analyzed was the Krispin² brand, under which were sold 25 items, including cereals, flour, macaroni, spaghetti, and noodles. In 1924, the Evanston Company had carried in stock 23 of the 25 items. The records on the stock sheets of the Evanston Company for the products in the Krispin line for the period from December 31, 1923, through March 3, 1925, are shown in Exhibit 1.

On December 31, 1923, the company had had in stock 827 cases of Krispin products. During 1924, there were delivered to the company 3,328 cases; at the end of the year 905 cases remained in stock. Thus, the company had sold 3,250 cases during 1924. The company's average inventory of Krispin products during 1924, based on the beginning and ending inventories for that period, was 866 cases. Sales, in cases, divided by this average inventory gave a stock-turn for the line of about 3.8 times in 1924. For the general groceries department as a whole the stock-turn, obtained by dividing sales in dollars by average

² Fictitious name.

inventory in dollars, was 4.8 times. It was the opinion of the buyer that the stock-turn for the Krispin brand of products should be above the average for the department. He believed that on a nationally advertised brand of staple articles, such as those in the Krispin line, the company should obtain an annual stock-turn of at least 7 times.

The buyer for the general groceries department decided that there was sufficient demand for items 1 to 6 of the Krispin line to justify the department's continuing to stock them. Items 7 and 8, however, he decided to discontinue. The company had sold but 5 cases of item 7 during the first 6 months of 1924. During the first week in July, 1924, the buyer had ordered 10 cases of item 7, and on March 3, 1925, these 10 cases still were in stock. Item 8 had sold even more slowly. The company had sold none of that item during the first six months of 1924, but, in the first week of July, had ordered five cases, three of which were on hand in March, 1925, nine months later.

Item 9 was a product for which there was a seasonal demand. During the 10 weeks following August 1, 1924, the company had sold 10 cases of that item. Because of the inability of the manufacturer to deliver promptly, however, five cases which the buyer had ordered on May 26 had not arrived until July 28. In order to have an adequate supply of this item on hand in 1925, the company purchased its requirements earlier in the year and, on the first of March, had five cases in stock.

The company was to continue to sell items 10 and 11. During the first 5 months of 1924, it had sold approximately 49 cases of item 10. During the last 8 months of that year, the company had received 115 cases, of which it had sold 90 prior to December 18, 1924. In January, 1925, the buyer had ordered 75 additional cases, and in March there were but 24 in stock. Although the sales of item 11 had not been so large as those of item 10, they had amounted to 45 cases during 1924.

The buyer decided to discontinue item 12, of which the company had sold only 8 cases during 1924. A minimum order of 5 cases thus represented nearly 8 months' supply.

Item 13 had sold rapidly during the first 2 months of 1924, but there had been no demand for it following that time, and the company had carried none of it in stock. The company had sold 24 cases of item 14 during the year 1924. Although the

company had sold but five cases of this item during the first three months of 1925, the buyer believed that its 1924 record justified the company in continuing to stock it. Item 15 had not sold rapidly in 1924, but the company had sold 6 cases of it during the first three months of 1925. The buyer, therefore, decided to continue this item, as well as items 16 and 17, of which the company had sold 74 cases and 239 cases respectively during 1924.

Because the company had sold only 1 case of item 18 and 4 of item 19 during the first 3 months of 1925, the buyer decided to discontinue them. The company had in stock similar articles which other manufacturers produced and which sold much more easily and quickly than did the Krispin brand. The buyer had discontinued items 20 and 21 during 1924 and did not intend to restore them in 1925 unless a demand developed. He planned to continue items 22 and 23 in stock; the company had sold 458 cases of the two items in 1924.

Although the buyer of the general groceries department had discontinued 3 of the 23 items of the Krispin brand in 1924 and had decided to discontinue 5 other items in 1925, the rate of stock-turn obtained from the line would not be increased materially. The inventory of each item discontinued had been small. The buyer could effect a greater increase in the rate of stock-turn for the line by purchasing the merchandise in smaller quantities than formerly.

The buyer attributed to two causes the large quantities of Krispin products which the company had had in stock through 1924 and early in 1925. First, wholesalers' orders for Krispin products ordinarily were not delivered for from six weeks to two months after date of order. Unless its customers requested immediate delivery, the Krispin Company did not make shipments to a city until there were sufficient orders from wholesalers in that city to make up a carload. For example, the 10 cases of item 16 and the 100 cases of item 17 which the Evanston Company had ordered during the first 2 weeks in January, 1925, were not delivered until the first week in March.

The salesmen of the Krispin Company, when taking an order from the Evanston Company, often did not specify whether they had obtained sufficient orders in the city to ship a carload from the factory immediately. It frequently had happened that within two or three weeks after obtaining an order the salesmen returned

to solicit further orders. The buyer for the general groceries department, expecting his first order to arrive soon, had then placed another order for future delivery, learning later that the Krispin Company planned to deliver both the first and second orders at one time. For example, the 25 cases of item 22 which the Evanston Company had ordered on August 21, 1924, and the 50 cases ordered on October 18, 1924, both had arrived on November 24, 1924. The 50 cases ordered on January 13, 1925, and the 35 cases ordered on February 16 had not arrived by March 3, with the result that the company had none of this item in stock. The buyer expected the 100 cases of item 23 which the company had ordered on January 26 and the 65 cases ordered on March 3 to arrive at the same time.

The second cause of the large purchases of Krispin items was closely allied to the first. Frequently, when a salesman for the Krispin Company needed only 100 cases or so to complete a carload, he requested the buyer for the general groceries department to place an order for that quantity. Although the buyer often did not need so large a quantity as he was requested to order, he usually complied with the salesman's request in order that the car might be shipped immediately.

Prior to the latter part of 1924, the buyer for the general groceries department had not analyzed the results of the methods of shipment used by the Krispin Company. In order to obtain more satisfactory deliveries in the future, however, he decided, in March, 1925, to specify each time he placed an order with that company that the merchandise was to be shipped immediately. He also intended never to order quantities in excess of his needs. The buyer planned to compute, from the records for 1924 and the early part of 1925, the average monthly sales of each item in the Krispin line and to use those as bases for determining future needs. He planned to have in stock the first month after the study was completed, or as soon as possible thereafter, a six weeks' supply of each of the items. In each ensuing month, he expected to place an order for one month's supply of each item.

COMMENTARY: The Evanston Company was dissatisfied with a stock-turn of 4.8 times in the general groceries department and sought to increase this rate. The rate of stock-turn for wholesale grocery companies for 1923, as reported to the Harvard Bureau of Business

Research,³ ranged from 3.5 times or less to 9.5 or more. The common figure for stock-turn for companies with net sales approximating those of the Evanston Company was 6 times in 1923. The Evanston Company desired an annual stock-turn of 7 times on at least one line of nationally advertised goods—namely, the Krispin brand.

Generally speaking, wholesalers' private brands do result in a slower rate of stock-turn than do nationally advertised goods. The department concerned in this case did not sell canned goods or dried fruits, items which are usually slow-moving, in the general groceries department, and the absence of such merchandise from the inventory of the department gave additional reason for careful analysis of the somewhat low stock-turn.

The analysis conducted by the company and the scrutiny of its merchandise, item by item, was an excellent approach to the problem. This examination revealed the fact that it was probably wise to cease handling certain items. In the case of each of these items, however, the amount handled was small and the stock-turn, therefore, would not be materially increased by dropping them. This would suggest that the fundamental difficulty was elsewhere.

The Evanston Company believed that at least part of this difficulty was due to conditions under which deliveries were made to it by the Krispin Company. In this, it was probably right in its criticisms of the policy of the Krispin Company. A wholesale grocer must expect to store merchandise for delivery to the retailer, but he also has the right to expect manufacturers to ship merchandise when it is ordered. It was unfair on the part of the manufacturer to expect the Evanston Company to overbuy in order to secure service to which it was entitled anyway—namely, prompt delivery. At times, the Evanston Company was compelled to wait from two to three months before receiving its merchandise. The decision to purchase in small quantities, adjusted to the actual needs of the Evanston Company, and to insist upon prompt shipment was only reasonable.

In the absence of some data regarding operating expenses, it is impossible to make any analysis of the situation in relation to such expenses. Information as to the extent to which the Evanston brand competed with the Krispin brand, the attitude of the Evanston Company's salesmen toward competing brands, and the advertising policy pursued by the Evanston Company in support of its own brands would be needed for further analysis of the problem. The question also arises as to whether or not the Evanston Company had given due consideration to the trend toward hand-to-mouth buying as affecting

³ Harvard Bureau of Business Research, Bulletin No. 40, *Operating Expenses in the Wholesale Grocery Business in 1923*, pp. 19, 20, 22.

the amount of stock carried. A careful survey of the size of the area the Evanston Company was seeking to serve, might have revealed important facts as to whether there was too large a measure of concentration on "easy" accounts.

The action of the company was sound and the conclusions reached were quite in accord with the analysis so far as it appears.

October, 1927

H. T. L.

LABAN COMPANY¹

WHOLESALE—GROCERIES

MERCHANDISING—*Computation of Savings from Quantity Discounts as against Increased Carrying Charges.* The buyer for the general groceries department of a wholesale grocery company wished to determine whether the quantity discounts received for making large purchases compensated for the increased carrying charges incurred. After computing the total monthly carrying charges for the department on a basis of interest and insurance, the buyer made an analysis of the net profit to be obtained by taking quantity discounts on two items. As a result of the analysis, the buyer decided that the discounts more than compensated for the increased carrying charges.

(1925)

In 1924, the Laban Company, a wholesale grocery firm, adopted an accounting system by which it was able to ascertain the total expense incurred in the operation of each of its departments. In 1925, it desired to utilize this information in determining whether discounts offered by manufacturers for large purchases compensated for the increased carrying charges incurred because of the resultant lower rate of stock-turn.

The Laban Company had annual net sales of about \$2,500,000 and a stock-turn of about 4.3 times a year. Its gross margin in 1924 was 13.5% of net sales; total expense, not including interest on owned capital, was 12.4% of net sales. Because of its strong financial condition, the company took advantage of all cash discounts and was able to borrow from banks ample capital for the operation of its business. The company always had taken all quantity discounts offered by manufacturers, whenever in the opinion of the buyer the quantity upon which the discount was offered was not too large for the company to purchase advantageously.

The company maintained stock sheets upon which, at intervals of about 10 days, it recorded by items the physical inventories in units and the quantities purchased during such intervals. Pur-

¹ Fictitious name.

chase cards, upon which the company noted the date and quantity of each purchase made, supplemented this record. While the stock sheets covered a period of from 12 to 18 months, the purchase cards frequently covered as long a period as 3 years. From the purchase cards buyers could ascertain the total quantity of each item purchased in each of the two or three preceding years. From the stock sheets they could learn the quantities on hand at the beginning and end of the year and the approximate average monthly sales, in units, of each item. The stock sheets also indicated the nature and extent of seasonal demands.

In the first part of 1925, the company had available the results of an accounting system which departmentized merchandise purchases, sales, and inventories, as well as all items of direct or indirect expense. The buyer for the general groceries department was of the opinion that this information should be used to determine whether it was profitable for his department to incur increased carrying charges in order to obtain quantity discounts. The items to be included in carrying charges first had to be determined. Rent had been allocated to each department on a basis of the ratio of the floor space required by the merchandise inventories in that department to the total floor space used by the company. Taxes and insurance had been charged to each department on a basis of the ratio existing between the average merchandise inventories of the department and the total merchandise inventories of the company.

If it were decided that rent, taxes, and insurance could be designated directly as carrying charges, the calculations would be as follows. The annual total of these three expenses would be calculated as a percentage of the average annual inventories valued at cost, and this percentage would be considered the annual cost, not including interest, of carrying the merchandise in stock. To this percentage would be added interest on the investment represented by the merchandise, computed at the average rate of interest which the company paid on its bank borrowings. The general groceries department's monthly carrying charges calculated in this way were 1.05% of the average annual departmental inventory, as shown in Exhibit 1.

The vice president of the Laban Company expressed the opinion, however, that rent should not be considered a cost of carrying merchandise. Any change one way or the other in the

method of purchasing individual items would neither permit the company to reduce its rent nor make necessary the engagement of outside storage space. It had been the company's experience, furthermore, that local taxes fluctuated but little; the company's assessments had been changed only once in several years. For these reasons, the vice president decided that carrying charges should consist only of interest and insurance.

EXHIBIT I

CALCULATION OF PERCENTAGE OF MONTHLY CARRYING CHARGES OF
GENERAL GROCERIES DEPARTMENT OF LABAN COMPANY TO
AVERAGE ANNUAL DEPARTMENTAL INVENTORY—BASED ON
RENT, TAXES, INSURANCE, AND INTEREST

Total rent allocated to general groceries department.....	\$ 3,611
Total taxes allocated to general groceries department.....	2,392
Total insurance allocated to general groceries department.....	496
Total.....	\$ 6,499
Average of beginning, middle, and ending inventories at cost in general groceries department.....	\$91,759
Percentage of rent, taxes, and insurance to average inventory.....	7.08%
Average annual interest rate.....	5.50%
Percentage of total annual carrying charges to average inventory.....	12.58%
Percentage of total monthly carrying charges to average inventory.....	1.05%

The company recognized that calculations based entirely upon these two items of expense would not be absolutely correct. For example, if the total inventory which the company maintained were reduced by 25%, the number of men required for the supervision of warehouses and merchandise would be decreased. A material decrease in the total inventory accompanied by more frequent purchases of smaller quantities would result, on the other hand, in increased unit costs of inward cartage, handling, and billing.

Since the company was able to borrow ample capital, the question was not raised as to whether the use of additional capital to obtain quantity discounts would detract from the possibility of purchasing other lines on which added net profits might be secured.

A reduction in stocks would increase the possibility of the company's not having in stock merchandise ordered by customers. Losses incurred as a result of delayed deliveries or inability to deliver could not be measured.

The total monthly carrying charges for the general groceries department, calculated on a basis of interest and insurance alone,

amounted to .5% of the average annual departmental inventory, as shown in Exhibit 2.

EXHIBIT 2

CALCULATION OF PERCENTAGE OF MONTHLY CARRYING CHARGES OF
GENERAL GROCERIES DEPARTMENT OF LABAN COMPANY, TO
AVERAGE ANNUAL DEPARTMENTAL INVENTORY—BASED ON
INSURANCE AND INTEREST

Average of beginning, middle, and ending inventories at cost in general groceries department.....	\$91,759
Total insurance allocated to general groceries department.....	496
Insurance as percentage of average inventory.....	.5%
Average annual interest rate.....	5.5
Percentage of total annual carrying charges to average inventory.....	6.0%
Percentage of total monthly carrying charges to average inventory.....	.5%

The buyer reasoned that in determining the carrying charges incurred by large purchases, the company should remember that normally it expected to carry in stock about a month's supply of most items. That is, if the quantity purchased were a four months' supply, the carrying charges for four months should not be used as a basis for judging the profit to be obtained from the quantity discount; before the carrying charges were calculated, one month's supply should be subtracted from the quantity considered.

On this basis, the company analyzed, for the purpose of determining the net profit to be obtained from taking quantity discounts, two items which were stable in price,² which were not

² Price fluctuations had to be given careful consideration in such an analysis of individual items. The general nature of fluctuations in wholesale and retail food prices is indicated by the following data:

WHOLESALE AND RETAIL FOOD PRICE INDEXES*
(1913 = 100)

	1923		1924		1925	
	Wholesale	Retail	Wholesale	Retail	Wholesale	Retail
January.....	141	144	143	149	160	154
February.....	141	142	143	147	157	151
March.....	143	142	141	144	159	151
April.....	144	143	137	141		
May.....	144	143	137	141		
June.....	142	144	136	142		
July.....	141	147	139	143		
August.....	142	146	144	144		
September.....	147	149	148	147		
October.....	148	150	152	149		
November.....	148	151	154	150		
December.....	147	150	158	152		
Average.....	144	146	144	146		

* Source: *Standard Daily Trade Service—Statistical Bulletin*, Second Quarter, 1925, pp. 37 and 35.

subject to deterioration, and which showed satisfactory net profits. The company's calculations are shown in the following two examples. The first example is of a commodity which cost \$2.25 a case, of which the company sold 25 cases each month, and on which the manufacturer gave a discount of 15 cents a case for purchases in 100-case lots. The second example is of a commodity costing \$5 a case, of which the company ordinarily sold 32 cases a month, and of which the company was required to purchase 100 cases in order to obtain a discount of $12\frac{1}{2}$ cents a case. Satisfactory deliveries on these items could be obtained for purchases in either large or small quantities. The company did not contemplate making any changes in the resale prices.

COMPUTATION OF NET SAVINGS RESULTING FROM PURCHASE OF TWO SAMPLE COMMODITIES IN QUANTITIES LARGE ENOUGH TO TAKE MANUFACTURERS' QUANTITY DISCOUNTS

Example 1

\$2.25 per case, 25 cases purchased each month = \$225, cost of 4 months' sales

\$2.10 per case, 100 cases purchased at one time = 210, cost of 4 months' sales

Total saving by taking quantity discount..... \$ 15

Calculation of carrying charges on purchase of 100 cases:

75 cases at \$2.10 1 month = \$157.50

50 " " 2.10 " " = 105.00

25 " " 2.10 " " = 52.50

Total extra capital required
during period to obtain

quantity discount..... \$315.00

$\$315 \times .5\%$ (percentage of carrying charges to average inventory, Exhibit 2) =

\$1.58 = carrying charges

$\$15 - \$1.58 = \$13.42$ = net saving

$\$13.42 \div \$225 = 5.96\%$ = saving on cost of 4 months' sales; this 5.96% is the actual saving based on the original cost of 4 months' sales, which was \$225.

Example 2

\$5 per case, 32 cases purchased each month = \$500.00, cost of $3\frac{1}{8}$ months' sales

\$4.87 $\frac{1}{2}$ per case, 100 cases purchased at one time = 487.50, cost of $3\frac{1}{8}$ months' sales

Total saving by taking quantity discount, \$ 12.50

Calculation of carrying charges on purchase of 100 cases:

68 cases at \$4.87 $\frac{1}{2}$ 1 month = \$331.50

36 " " 4.87 $\frac{1}{2}$ " " = 175.50

4 " " 4.87 $\frac{1}{2}$ " " = 19.50

Total extra capital required dur-
ing period to obtain quantity

discount..... \$526.50

$\$526.50 \times .5\% = \2.63 = carrying charges

$\$12.50 - \$2.63 = \$9.87$ = net saving

$\$9.87 \div \$500 = 1.97\%$ = saving on cost of $3\frac{1}{8}$ months' sales; this 1.97% is the actual saving based on the original cost of $3\frac{1}{8}$ months' sales, which was \$500.

The commodities used in these calculations were of such nature that their sales could not be increased advantageously. The buyer decided that, despite the lower rate of stock-turn and the resultant carrying charges involved, he would continue to purchase these articles in quantities large enough to obtain quantity discounts. He intended to analyze similarly all items in his department on which quantity discounts were offered.

COMMENTARY: It would appear that, so far as the decision in the case of the two commodities here analyzed is concerned, the action of the company would not have been affected by its judgment on whether or not to include rent and taxes in its analysis. In these particular instances, a distinct saving was made by taking quantity discounts, whichever method of computation was used. It should be noted that the question was not whether or not these two items were properly charges against the business, or whether or not they should enter into price. Specifically, it was a question of the comparative costs of two contrasting policies as related to individual items, and also a question as to the proper distribution of expenses.

The company itself called attention to the fact that its computation was not altogether accurate when the items of rent and taxes were omitted. It would appear that a further possible source of error was not considered. If the company were to abandon the practice of taking discounts in its general groceries department, it would then appear that the total figures in Exhibit 1, so far as rent and taxes were concerned, would be reduced to some extent. As an item in itself, this reduction might or might not prove large. However, in the distribution of expenses and in the relation of that distribution to the margin of saving, it is conceivable that the results might be rather far reaching. While it is true that the total rent for the company and the total taxes charged against the company might not be reduced, yet the allocation of expense as between the general groceries department and other departments obviously might be different. If the policy of buying for three or four months in advance were abandoned, the reduction in the amount of rent and taxes charged to this department might be between 25% and 50%.

It should also be noted that, if the company continued to take these discounts and carry several months' supply in stock, the speculative element would be considerably larger than under the other policy. Increases or decreases in the marketing price would obviously have material effects upon the company's financial status. This factor does not appear to have been considered. It may be that the Laban Company chose to decide the question solely on a basis of saving in warehouse expense.

Another aspect of the question which is not considered is the relation of the wholesaler to the manufacturer in so far as the storage function is concerned. If the Laban Company should decide to abandon its policy of taking discounts, it would obviously shift a considerable portion of the storage function back upon the manufacturer. The consequences of this proceeding might be very interesting. It is usually considered that the storage function is properly performed by the wholesaler. In so far as he shifts the burden of this and other functions to the manufacturer, he is to that extent weakening his position as a factor in the distributive process.

October, 1927

H. T. L.

THOREAU COMPANY¹

WHOLESALE—GROCERIES

MERCHANDISING—*Manufacturers' Brands Partially Replaced by Private Brand.*

A wholesale grocery company learned that it could obtain canned milk from two canners at a price which would allow it to sell the milk under its own brand with a higher gross margin than it received on manufacturers' brands. The company decided, therefore, to begin selling canned milk under its established private brand and gradually to eliminate as many of the manufacturers' brands as possible.

(1924)

The Thoreau Company, a wholesale grocery firm which sold a general line of groceries, discouraged the sale of items on which it obtained a low gross margin, concentrating sales efforts upon merchandise which yielded a high gross margin. The company desired to increase the proportion of merchandise sold under its private brand, especially of that merchandise under its private brand on which the gross margin was high. The company never had placed its own brand upon canned milk; competition on nationally advertised brands of canned milk was keen, and gross margin on the article was small. In the latter part of 1924, however, the company contemplated selling canned milk under the Thoreau brand.

The Thoreau Company operated in a southern city with a population of more than 250,000. Under its private brand the company sold coffee, tea, canned goods, and some bottled goods. It was spending about \$25,000 annually in advertising this private brand in local newspapers. Total annual sales of the company were about \$2,250,000, approximately 2½% of which were of canned milk. Total gross margin in 1924 was 13.25% of net sales; and total expense was 13.2%. The annual rate of stock-turn for the company as a whole was about 4½ times. The company divided merchandise purchases, sales, and inventories into departments, one of which was the canned milk department.

¹ Fictitious name.

Salesmen of the Thoreau Company received percentages of the adjusted gross margins obtained from their sales. The executives analyzed the sales of each salesman and used these analyses in determining for each department the trend of sales and the proportion which the department's sales were of total sales. Each buyer had stock records upon which were recorded by items the quantities and the dates of merchandise purchases and receipts, and, for each item of merchandise, the physical quantity in stock at the first of each week.

Competition between manufacturers of canned milk was keen. It was usual for the manufacturers to send missionary or specialty salesmen into the company's territory. These salesmen actively solicited retailers, giving the orders secured to the wholesalers from whom the retailers ordinarily purchased. Because of the competition which its customers encountered from chain stores, the Thoreau Company had to sell manufacturers' brands of canned milk upon a low gross margin. The company did not sell to chain stores.

In June, 1924, the Thoreau Company was selling canned milk under nine manufacturers' brands, most of which were advertised nationally. The company sold two of the brands in one size only; four, in two sizes; and three, in three sizes. Its total sales of canned milk during the first 6 months of 1924 had been 5,195 cases; the average inventory had been 768 cases. Selling prices of canned milk to retailers were subject to seasonal and local variations; the company was able to obtain an average annual gross margin of about 5% of net sales on manufacturers' brands of milk. At times the gross margin was as low as $3\frac{1}{3}\%$.

As an attempt to stabilize selling prices of canned milk at a level which would yield a higher gross margin, the company contemplated selling canned milk under the Thoreau brand, which had been established on other products and which the company was advertising.

The Thoreau Company investigated the reputations of various large canners who already were selling canned milk under their own brands. It obtained samples of milk from those manufacturers whose reputations for quality and service were satisfactory and it analyzed the samples to determine their butter fat content. On a basis of this analysis and the results of the investigation of

the canners' reputations, the company chose two canners with whom to negotiate.

The company learned that it could purchase milk from those canners at a price 25 cents a case less than the price at which they sold milk bearing their own brands. The canners were willing, furthermore, to make an allowance of 5 cents a case for the omission of their own labels. As the labels which the Thoreau Company expected to place upon the milk cost 12 cents a case, the total cost to the Thoreau Company of the canned milk would be 18 cents a case less than the price of the canners' brands. Consequently, the average gross margin which the company could realize on milk sold under its own brand would be nearly 10% of net sales, as contrasted with the average of 5% obtained upon manufacturers' brands.

The company learned also that occasionally, in periods in which the supply of milk was large, the canners were willing to sell milk to wholesalers, for sale under the wholesalers' brands, at prices as much as 50 cents a case lower than the prices at which the canners sold their own brands. The wholesale grocery companies which had private brands could reduce correspondingly their prices to retailers, therefore, and enable the retailers to sell the wholesalers' brands of milk at the same price at which chain stores were selling nationally advertised brands of milk. Under these circumstances, the retailers would receive fair gross margins from sale of the wholesale grocery companies' private brands of milk, even though the chain stores were selling nationally advertised milk approximately at cost. The Thoreau Company also found that each order which it placed with canners for milk to be sold under its private brand would have to constitute at least one carload, approximately 750 cases.

The company decided to sell milk under its private brand and to devote a portion of its advertising appropriation to that milk. Late in October, 1924, the company placed the first order, for 1,400 cases of cans of the most popular size only. The company received the milk in the week preceding November 16, and on November 16 had an inventory of 1,000 cases. The company instructed its salesmen to sell its own brand of milk whenever possible. On December 4 the company's inventory of private brand milk was 274 cases.

Inventories and purchases, in cases, of manufacturers' brands of milk during 1924 and part of 1925, were as shown in Exhibit 1.

During the last 6 months of 1924, the company sold 6,069 cases of milk, of which 4,943 cases were under manufacturers' brands. Thus, while the sale of manufacturers' brands during that period had decreased by about 250 cases from sales during the preceding 6 months, total sales had increased by 874 cases. During the first 5 months of 1925, the company's total sales of canned milk equalled 4,779 cases, of which 2,716 were under manufacturers' brands and 2,063 under the company's private brand. The company paid about \$4.25 a case for the milk which it sold under its private brand, and sold the milk at prices ranging from \$4.60 to \$4.75 a case, thus taking a gross margin of from 7.5% to 10.4% of sales.

The Thoreau Company's sales of some of the manufacturers' brands had remained high, but the sales of others had decreased sharply. The company did not intend to repurchase those brands of milk, sales of which had decreased sharply. By the first of May, 1925, the company had in stock no milk of brands 4, 8, or 9; the company intended to sell what stock it had of brands 5 and 7, not reordering when the stocks became depleted. Thus, the company would have in stock only four manufacturers' brands of canned milk in addition to its own. If at any time the sales of one of these manufacturers' brands decreased materially, the company planned to eliminate that brand from its stock. The company expected to continue to place sales emphasis upon the Thoreau brand of milk.

In October, 1927, after two years' experience of selling its private brand of canned milk, the Thoreau Company was satisfied with the results of its change in policy. During that time sales of its own brand of canned milk had steadily increased, and in October it was receiving that milk at the rate of a carload about every 10 days, at lower prices than it had first received. The manufacturers' brands of milk which it was still carrying were being bought in 25-case lots, except in the case of one brand, which was bought in 100-case lots. Because the company was able to buy can labels in larger quantities at a time, the cost of the labels had been reduced by \$1.50 a thousand. The retailers to whom the company sold the milk had been able to meet the competition of chain stores and at the same time to make a fair

EXHIBIT I
THOREAU COMPANY'S INVENTORIES AND PURCHASES OF MANUFACTURERS' BRANDS OF MILK, BY SEMI-ANNUAL PERIODS, THROUGHOUT 1924, AND UNTIL MAY 7, 1925

Brand	Size	Inventory Dec. 6, 1923	Purchases during Period	Inventory June 4, 1924	Purchases during Period	Inventory Dec. 4, 1924	Purchases during Period	Inventory May 7, 1925
1	A	82 cases	1,965 cases	328 cases	2,000 cases	564 cases	825 cases	432 cases
2	B	93	600	44	950	238	75	102
	A	90	588	103	260	122	125	113
	B	25	225	48	150	57	50	24
	C	0	0	102	5	4	0	3
3	A	108	575	71	550	192	200	29
	B	48	225	57	250	42	150	35
4	A	5	380	25	350	173	100	0
	B	0	110	3	150	118	0	0
	C	0	11	10	0	12	0	0
5	A	10	75	8	100	10	50	0
	B	19	15	27	10	5	10	8
6	A	0	305	14	225	29	90	3
	B	47	20	17	145	10	50	12
7	A	0	145	8	103	10	100	1
	B	2	25	12	45	22	0	13
8	C	17	30	10	20	13	25	14
	A	11	285	0	325	34	0	0
9	A	19	0	7	0	0	0	0
		570	5,579	960	5,638	1,655	1,850	789

profit. The company believed that the advertising of its own brand, which it had consistently carried on in its local territory, had contributed largely to the increase in its sales of milk bearing that brand.

COMMENTARY: This case describes a wholesale grocery company that was successful in securing a higher rate of stock-turn on its private brands than it enjoyed on several competing manufacturers' brands. This is not the usual situation, for, generally speaking, wholesalers' private brands turn more slowly than manufacturers' brands, primarily because of the necessity of purchasing in larger quantities in order to secure satisfactory quality and price. In some instances, indeed, as in the case of the Evanston Company,² manufacturers' brands are carried primarily in order to increase the average rate of stock-turn. Moreover, it is worthy of note that a notoriously slow-moving line—canned goods—provided a substantial volume of the Thoreau business, while such goods were not carried by the Evanston Company at all.

The reason for this more rapid stock-turn in the Thoreau Company was evidently the special emphasis placed by an aggressive sales organization on the private brand. It may be noted, also, that emphasis was placed on merchandise yielding a high gross margin, a policy that at times may be open to question. Furthermore, the Thoreau Company dropped five very slow-moving manufacturers' brands entirely, retaining only four of the nine brands originally carried.

On a basis of the particular conditions, the policy of the company was undoubtedly sound. It should be noted that the company would not have been able to pass on the desirability of the proposed policy had it not maintained an adequate system of merchandise control.

October, 1927

H. T. L.

² See Evanston Company, page 415.

CLARK PUMP COMPANY¹

MANUFACTURER—GASOLINE PUMPS

ADVERTISING—*To Develop Brand Recognition among Consumers.* Because of the apparent success of one of its competitors in using consumer advertising, the company, a manufacturer of gasoline pumps, contemplated advertising to gasoline purchasers also. An advertising agency engaged by the company recommended that the company advertise its pumps in a general, weekly magazine with national circulation in order to develop consumer recognition for them. The agency presented a market analysis and campaign plan.

(1927)

The Clark Pump Company, one of the largest companies in the industry, manufactured and sold throughout the United States gasoline pumps of high quality. In 1927 the executives of the company considered spending \$75,000 for consumer advertising in one of the leading weekly magazines as a means of increasing sales and of building prestige for Clark pumps.

The Clark Pump Company distributed its products through sales branches. Each branch was superintended by a manager, who was responsible for the sales of his branch. The salesmen, who were paid on a salary and commission basis, called upon all potential purchasers of gasoline pumps in their territories. The company had never done any consumer advertising, but it spent about \$30,000 annually in advertising to the trade directly by mail and in trade papers.

The Clark Pump Company manufactured eight models of gasoline pumps. These models were divided, roughly, into two classes, all-metal pumps and visible pumps. An all-metal pump was a piston pump which registered the gallons pumped by a dial and needle located upon the outside of the pump. A visible pump was an air-pressure pump which registered the gallons by means of the contents of a glass container on the top of the pump. The larger proportion of the sales of the Clark Pump Company were of all-metal pumps.

¹ Fictitious name.

The pumps manufactured by the Clark Pump Company had no patented features to give them a competitive advantage over other makes of pumps. Since the pumps lacked any such features, the most important selling points for them were their excellence of manufacture, the ease and accuracy of their operation, their dependability, and the service and cooperation rendered by the Clark Pump Company to the purchaser. Although the company sold most of its pumps under the brand name "Clark," the name was not displayed prominently, but was stamped into the iron casement of the pumps and also was printed on the dial face of the metal pumps. If a pump was repainted by the purchaser, the trade-mark on the casing was scarcely distinguishable. Furthermore, the design of the pumps sold under the trade name did not distinguish them from other brands of pumps. The company manufactured a few pumps in distinctive designs at the request of large purchasers who used the designs of the pumps to identify their brands of gasoline in the minds of consumers. The prices of Clark pumps were approximately the same as the prices of competing pumps of similar quality and construction.

Gasoline pumps were bought by independent retail distributors of gasoline and by large oil companies which distributed gasoline either under their own brands or under the brands of producing petroleum companies. Independent retail distributors of gasoline were of three types: owners of automobile accessory stores or other retailers who installed gasoline pumps on the curbs in front of their stores; garages that usually operated one or more pumps as a convenience to their customers; and individually owned filling stations that usually were conducted in conjunction with some other type of retail business. There were more independently owned filling stations in rural districts than in metropolitan districts.

There were three types of oil companies: national oil companies, which owned oil wells and operated on a national scale; sectional oil companies, which operated in two or more states; and local oil companies, which operated in one or more cities. The sectional and local companies usually did not own wells but bought gasoline from the larger petroleum refining companies. The executives of the Clark Pump Company believed that in the order of their importance as purchasers of pump equipment, the

national oil companies ranked first, the local companies ranked second, and the sectional companies ranked third.

Oil companies bought pumping equipment in large quantities. These companies either used the pumps in their own filling stations or leased them to companies controlling filling stations. In some cases the oil companies bought pumps for resale to independently owned filling stations. This practice was largely confined to the Pacific Coast.

In accordance with the belief of executives of the Clark Pump Company that the importance of oil companies as outlets for gasoline pumps was increasing and that the sale of pumps to independent retail distributors was decreasing, the company, about five years prior to 1927, had started directing its most aggressive sales efforts toward oil companies. Oil companies were dependent for their sales of gasoline upon filling stations located at easily accessible points. Independently owned stations were not always placed in the best locations and frequently changed the brands of gasoline that they sold. Oil companies, furthermore, could not control sales of independently owned filling stations in regard to accurate measurement and freedom from adulteration. Consequently, the oil companies, in order to insure permanence of their sales outlets and also to insure control over the sale of their gasoline, were being forced either to operate their own filling stations or to control their filling stations by leasing the stations or their equipment to selected operators.

The Clark Pump Company had shaped its marketing policy to conform with the buying habits of oil companies. The oil companies, so the executives of the Clark Pump Company believed, used the gasoline pump as an integral part of the marketing plans for their gasoline. The pump performed the same functions in the sale of gasoline that the package performed in the sale of other bulk products; namely, advertised the gasoline at the point of purchase, identified the brand of gasoline, and insured the purchaser of accurate measurement, cleanliness, and quick service. As a result of this belief, the Clark Pump Company had made no attempt to establish consumer brand discrimination for its own products but instead had pursued the opposite policy. Clark salesmen pointed out to prospective purchasers that the unusually large flat surface in the casing of Clark pumps was especially designed for display purposes and that the trade-mark

of the Clark Pump Company was subordinated in order that it might not conflict with the display of the trade-mark of the brand of gasoline. The Clark Pump Company had sought to win the confidence of the oil companies through the assurance that it would cooperate in every way possible to produce a pump which would meet their marketing requirements. By sales demonstrations and by direct-mail and trade paper advertising to oil companies and filling station operators the company had sought to win recognition for its pumps among pump users on the grounds of speed, accuracy, dependability, and low servicing cost. During the five years in which this policy had been followed, the sales of the Clark Pump Company had showed a satisfactory increase.

Competition among manufacturers of gasoline pumps was keen. There were six manufacturers who made pumps which were, in many respects, similar to those made by the Clark Pump Company. Five of these manufacturers had sales policies which paralleled that of the Clark Pump Company. The sixth competitor, however, had followed a policy which was the antithesis of this. This competitor had standardized production upon a distinctive model of visible pump and had advertised that pump extensively to consumers as the most accurate measuring pump made. In its approach to oil companies this competitor stated that its consumer advertising had created so much confidence in its pump as an accurate means of measuring gasoline that the oil companies must install this brand in order to hold the goodwill and confidence of their customers. The growth in sales which this competitor was reported to have experienced caused the executives of the Clark Pump Company to consider whether consumer advertising would also increase the sales of Clark pumps, by winning for them, among purchasers of gasoline, recognition of the accuracy which the executives knew they possessed.

Certain executives of the company were of the opinion that consumer advertising would achieve the desired increase. They believed that consumer advertising would create nation wide prestige for Clark pumps and thereby win the confidence of gasoline purchasers in their accuracy of measurement. Should consumer advertising do this, the oil companies would be able to trade upon the prestige of Clark pumps by stating that they used

Clark pumps in order to insure their customers the utmost protection in accuracy of measurement. This advertising, further, might be expected not only to counteract the national advertising of competitors, but, at the same time, to conform to the marketing policy of the Clark Pump Company, by giving to oil companies an additional sales advantage which they in turn could use in selling their brands of gasoline to consumers. It also might be expected to react upon the operators of filling stations and thereby cause them to demand Clark pumps from the oil companies. Then, too, a nation wide recognition of the accuracy of measurement of Clark pumps among purchasers of gasoline would aid in evening the distribution of the company, which in some territories was spotty.

Other executives of the company, on the other hand, believed that purchasers of gasoline rarely noticed the brand of pump used by a filling station. These executives held that purchasers relied upon the filling station and the gasoline company to provide them with accurate measurement and protection against adulteration. The filling station operators recognized this attitude on the part of purchasers and consequently could not be influenced to demand a specific brand of pump from the oil company by any consumer advertising which the Clark Pump Company might do. Filling station operators, in the opinion of these executives, were influenced in their selection of pumps chiefly by price, speed, accuracy, and dependability. These qualities, characteristic of Clark pumps, could best be brought to their attention by the sales promotion activities then being used by the Clark Pump Company. These executives further believed that consumer advertising would antagonize the oil companies because it would tend to place more emphasis upon the pumps than upon the gasoline.

An advertising agency, however, was employed to report upon the feasibility of advertising Clark pumps to consumers. The agency was to determine whether consumer advertising could create among purchasers of gasoline a sufficient recognition for the accuracy and dependability of Clark pumps to be effective in increasing sales and prestige. After making an investigation, the agency recommended that the company undertake an extensive advertising campaign in the *Saturday Evening Post*.

The edited report submitted by the agency follows:

SUMMARY OF FIELD INVESTIGATION

Introductory

In accordance with our convictions that a sound advertising plan must be based on accurate knowledge of trade conditions and the particular problems that confront a manufacturer, one of our first steps in the preparation of this plan was to conduct through our Commercial Research Department a comprehensive field investigation. This survey had two main purposes: first, to secure first-hand information on the market for gasoline pumping equipment, buying practices, and circumstances of use; and second, to ascertain the reaction of those who have a direct or indirect interest in gasoline pumping equipment to the various ideas and suggestions that we had under consideration for the promotion of your product. In other words, it was our aim to reduce to proven facts, in so far as practicable, the recommendations embodied in this plan.

Scope of investigation

Personal calls were made by our investigators on oil companies, who are the buying factors for pumping equipment; on gasoline filling stations, operators, and garages, who are the users of pumps; and on car owners, who are served by gasoline pumping equipment. All sections of the country were covered in this investigation.

Brands of pumps encountered

In addition to your own, our investigators encountered 21 brands of gasoline pumps in the course of the investigation. Some of these were found at only one or two places, while others were mentioned as in use by a number of oil companies and gasoline station operators.

Number of brands oil companies buy

It appears to be the general practice of oil companies not to confine their pump purchases to one manufacturer, but to buy from one to three concerns. There were a few who stated that they used only one pump, while at the other extreme, several spoke of buying as many as four or five brands but the great majority divide their pump purchases among two or three companies.

Some oil companies standardize on one pump for use at the stations which they operate themselves, but buy various other brands to be supplied to independent dealers that they serve.

Present tendencies in the retailing of gasoline

According to Mr. Ayre² of the *Gasoline Topics Magazine*² there are several noteworthy developments taking place in the retail distribution of gasoline.

For one thing, the filling station is constantly growing in importance, as the main outlet for gasoline. This is due to the fact that car owners find it more convenient to purchase gasoline from a filling station than from a garage, automobile service station, or the other miscellaneous types of dealers. Some confirmation of this is found in the statements

² Fictitious name.

of various garages which were interviewed to the effect that they do not sell as much gasoline today as they formerly did.

A second change is that represented by the tendency of oil companies to own and operate their own service stations, or at least establish service stations on a basis which will enable them to exert some supervision and control over them.

One of the reasons for this, is that independent dealers are constantly switching from one brand of gasoline to another, which necessitates frequent changes of pumps and entails considerable expense to the oil company. Moreover, an oil company is more certain of securing advantageous locations and attractive places of business by taking the initiative in placing filling stations.

A final important development in the oil industry is the growth of the independent companies. It is estimated by Mr. Ayre that at the present time only 35% of total gasoline sales is being retailed by the Jones Oil Company³ and the large independents; the remaining 65% of the business is in the hands of the smaller independent companies.

Number and types of oil companies

Figures compiled by the *Gasoline Topics Magazine* place the number of oil jobbing companies in the United States at 7,000.

Included as oil jobbing companies are those concerns that market gasoline under their own brand names as well as concerns that function simply as distributors for some well-known gasoline. Both types of oil jobbers are purchasers of gasoline pumping equipment, although in some cases it appears that an oil distributor is able to buy pumps at a better price from the gasoline company than from the pump manufacturer.

Number of outlets for gasoline and number of pumps in use

An estimate of the number of outlets for gasoline and the number of pumps in use, submitted by this publication, is as follows:

75,000 filling stations averaging 3 pumps each	225,000 pumps
100,000 garages, repair shops, etc., averaging	
1½ pumps each	150,000 pumps
75,000 hot-dog stands, grocery stores, general	
stores, and miscellaneous types averaging	
slightly over one pump each	100,000 pumps

The total number of pumps in use would seem to be in the neighborhood of from 450,000 to 500,000.

The number of filling stations is said to be increasing at the rate of from 10% to 15% a year, to which must be added in estimating the annual market for pumps, the replacement business and the influence of certain changes such as the introduction of high test and specially treated gasoline, which results in two pumps being used where only one has been.

³ Fictitious name.

Factors which influence the purchase of pumps

The points most frequently mentioned by oil companies as the ones to which they attach greatest importance in selecting pumps are: first, quality, which refers to accurate and dependable operation with the minimum of repair service; second, price; third, service—by which is frequently meant the proximity to the manufacturer and his ability to make prompt deliveries.

The general reputation of the manufacturer and the pump, ease of operation, and speed of pumping were other factors that were mentioned.

Considerable preference was expressed for the visible, air-pressure type of pump, though this was by no means universal, and it is noteworthy that a number of oil companies use the piston type of pump exclusively at their own filling stations.

Due to the fact that pumps are the property of the oil company, independent dealers who have them on a lease basis are said to neglect taking good care of them, and consequently the serviceability of a pump is highly important to the oil company.

Qualities about pumps desired by station operators

The points about pumps which chiefly interest the station operator are speed and ease of operation. His main concern is to serve customers quickly and with the minimum of physical effort. Accuracy was mentioned by some as an essential quality, though, for the most part, this seems to be taken for granted and assured in the final analysis by the state or city inspector of weights and measures.

Good appearance and durability were also spoken of as qualities desired in a pump, and particularly at the large and busy service stations where it is necessary for the manager or proprietor to keep an eye on all that is going on around him, the slender type of pump is preferred because it obstructs the vision less.

Among some dealers, and in certain localities, the popularity of the visible type of pump is quite pronounced, and in some states it is reported that the visible pump is required by law.

Brand consciousness among filling station operators

Among independent dealers, that is, those who have pumps on lease from oil companies, brand consciousness, so far as pumps are concerned, is in evidence to only a slight degree. A great many appear quite indifferent both as to the type and brand of pump which is supplied, and even where a certain type such as the visible is desired, the preference of a dealer seldom extends to a particular brand as well.

It seems to be generally assumed by dealers that all reputable oil companies furnish satisfactory pumps, and it is rare for the brand of pump to be a serious consideration in negotiating with an oil company to handle its gasoline.

Although somewhat exceptional, there are instances where dealers have requested an oil company to supply some specific brand of pump.

Oil companies themselves state that they occasionally get requests from dealers for a certain brand of pump and they generally endeavor to give a dealer what he wants if he appears reasonable. Thus, if a dealer asks for pumps which they handle regularly, his wishes will readily be observed; otherwise, the chances are that the oil company will tell him that they cannot supply that pump and will ask him to make his selection from the brands they stock. If the dealer is an especially large and valuable account, however, the oil company may, if necessary, go beyond its regular sources of supply and make a special purchase of the pump the dealer has requested.

Certainly the proportion of dealers who request or express a real interest in the brand of pump is small, and such brand preference is more frequently based on the mechanical features of a pump rather than other considerations. The dealer wants or does not want a particular make of pump because of his or a neighbor's experience. A few were encountered in the course of the investigation who declared that they had been influenced to demand a visible pump because of the advertising, but such cases were not common.

Interest of car owners in gasoline pumps

The extent to which car owners are interested in the brand or type of gasoline pump was checked up by questioning both filling stations and car owners themselves. Both sources of information clearly indicate the negligible attention paid to the pump by the motoring public.

Of 100 car owners, picked at random, who were asked if they paid any attention to the brand of pump from which they buy gasoline, 84% replied in the negative, and only 16% in the affirmative.

A further question which asked—"Have you any preference as to what type and what brand of gasoline pumping equipment is used in measuring out your gasoline?"—yielded 34% answers in the affirmative. The next question which asked—"Which type or which brand do you prefer?"—showed that what little preference exists at all refers only to type and not to brand. Twenty-five per cent preferred the visible type, 3% the automatic type, and 3% the type with a bell.

In spite of this, however, there is evidence that the consumer advertising that pump manufacturers have done has attracted some attention, for when asked what pump advertising had been seen 27% mentioned one competitor, 4% another competitor, and 1% a third competitor.

As a final question, car owners were asked, "If you knew that certain oil companies used a nationally known pump, whose accuracy was vouched for, while another oil company station used an unidentified pump, would it influence you in your gas purchases, provided, of course, the quality of gas used by the two company stations was the same?"

Sixty-seven per cent said "yes;" 8% said "might;" 17% said "no;" and 8% gave miscellaneous answers or did not reply to the question.

As indicated by our questionnaire among car owners and as confirmed by statements of the trade, the public does pay some attention to the type of pump.

The preference in some localities for the visible type of pump is strongly marked, and oil companies generally acknowledge that regardless of what else might be said about consumer advertising on pumps, it has been this advertising which has largely popularized the visible pump.

Confidence of public in accuracy of pumps

According to the statements of retailers of gasoline, the public seldom questions the accuracy of gasoline pumps. It was said that the motoring public knows that pumps are tested for accuracy by state or city officials from time to time, and this alone is regarded as sufficient protection.

Turning to the statements of car owners themselves we find that 28% of those interviewed have had reason to think that some gas stations did not give full measure, although, of course, the answers to this question did not necessarily mean that it is a common experience.

Influence of consumer advertising on oil companies

It is characteristic of human nature to be reluctant to admit the influence of advertising on buying habits and doubtless this is particularly true with oil companies in their attitude towards consumer advertising on gasoline pumps. The view expressed by one oil company that it "would prefer to see the pump manufacturers keep quiet in an advertising way, as the oil companies are desirous of having the attention of the public focused on the brand of gasoline" is probably shared by many others.

Realizing this, and, at the same time, desiring to get the true reaction of oil companies to consumer advertising on pumps, we instructed our investigators in conducting these interviews, not to state that the survey was being made on behalf of a pump manufacturer, but simply to say that it represented a general study of indirect advertising.

Some reflections of the opinions of oil companies on this subject have been given in preceding sections. Oil companies were practically unanimous in declaring that consumer advertising on pumps does not influence their purchases; that it has no effect whatsoever on car owners; and that it has little, if any, effect on station operators. In brief, the view was generally expressed that such advertising is worthless and futile.

While many of the oil companies interviewed did not go further than to express simply negative interest in pump advertising, there were others who showed positive antagonism towards it and resent any efforts on the part of pump manufacturers to attract public attention to their equipment. They seem to feel that arousing public interest in pumps diverts attention from the brand of gasoline, which, of course, is their primary interest, and is confusing to the public.

While it is true that at the present time comparatively few dealers request oil companies to furnish any particular brand of pump, it is worth mentioning that a number who were interviewed in this survey expressed a preference for pumping equipment that is advertised and well known.

Advertising and merchandising suggestions

Oil companies and gasoline station operators were questioned about various advertising ideas and merchandising suggestions that were under consideration in the preparation of this plan. The various proposals and the reaction of the trade to them will be discussed in the following sections.

Attracting better class people to the oil business

The success with which manufacturers of equipment in other fields, as, for example, the American Laundry Machinery Company, have had in bringing a better class of people into the business and in general raising the standards of that business through advertising, suggested the possibility of a similar accomplishment in the oil industry.

Oil companies were inclined to doubt, however, the practicability of using consumer advertising for this purpose in the retailing of gasoline. The main conclusion that can be drawn on this topic is that the type of men engaged in retailing gasoline is largely governed by forces of competition.

Furnishing signs for retailers of gasoline

The desirability of a pump manufacturer's furnishing with each pump, two signs, which would couple both the brand name of the gas and the name of the pump, was discussed with both oil companies and station operators. While the primary thought was that such signs would be erected at a short distance from the station, opinions were also obtained on the use of such signs at the pump itself.

The usefulness of signs of this kind would apparently be limited to filling stations or other retailers of gasoline located along country highways. Garages and filling stations located within city corporation limits would seldom be able to use such signs and, in fact, the present practice for all filling stations is said to be to secure a conspicuous location that is clearly visible for some distance and which renders the use of highway signs unnecessary.

Our survey also discloses that it is the general practice of oil companies to furnish their dealers with such signs as are needed or requested. Nevertheless, it was brought out that country filling stations are not always well marked and additional signs could very well be utilized by them.

Although a number of stations could not use signs, for reasons previously given, those that were in a position to erect them generally appeared willing to have the name of the pump together with the brand of gasoline, provided the pump name was not made the more conspicuous.

Advertising to encourage motor travel

Advertising designed to stimulate motor camping and motor traveling in general was discussed with oil companies and filling stations. While advertising of this character would doubtless have the advantage of being very readable, and also meeting with some approval, it was doubted by a good many whether, in view of the advertising along

these lines that is being done by oil companies, and the general publicity which is being given to the subject, the advertising that a pump manufacturer could do would be a sufficient addition to be effective.

Educating the public to buy gasoline in larger quantities

Our investigation among car owners shows that 79% of those interviewed buy gasoline in lots of 5 or 10 gallons rather than having their tanks filled up. With the exception of a few garages, the trade also reports that car owners generally buy in 5 or 10 gallon units.

The possibility of advertising the idea to the motoring public, of having their tanks filled up when buying gasoline, was discussed with both oil companies and filling stations. The majority seem to feel that even if this idea could successfully be promoted, it would not materially benefit the oil industry. Automobiles cannot run on anything but gasoline and it makes no difference in the final consumption of gasoline whether a car owner buys five gallons three times a day, or fifteen gallons once a day. It was also doubted by some whether the public could be educated to this habit.

Several stations stated that they have customers who buy gasoline in quantities of from only one gallon to four gallons, because they are unable to afford larger purchases, and this, of course, constitutes an economic obstacle.

Nevertheless, several dealers gave hearty approval to this idea, because it would result in less service for the amount sold, and they thought this would mean more economical operation of their station.

One dealer claims that automobiles, and particularly Fords, run better if the tank is full.

Explaining different kinds of gasoline

The advent in recent years of high-test gasoline, and various varieties of "doped" gasoline has an obvious bearing on the market for pumping equipment. If it becomes the general practice of filling stations to sell two grades of gasoline in place of one, the number of pumps in use will be practically doubled.

The prediction was made by one oil company at its New York office, that eventually nearly all stations will handle both regular gasoline and high-test gas. This is explained in part by the growing market for kerosene and fuel oil which makes it profitable for refineries to produce high-test gasoline without undue waste.

Publicity that would explain the difference between the various types of gasoline and their fields of use, without, however, mentioning specific brand names, was one of the measures considered in the preparation of this plan. While a fair number of stations were found that handle two kinds of gasoline, this is as yet by no means a universal practice, and the survey indicates that such advertising would not meet with the approval of the numerous oil companies and filling stations, many of whom were among the largest, who are producing only one grade of gasoline.

Advertising the gasoline station operators

Gasoline station operators were sounded out on their attitude toward advertising that would feature the usefulness and reliability of the services they render.

One garage proprietor stated that: "A pump manufacturer could do a tremendous amount of good to really educate the public in regard to the gasoline station and the service it is rendering. Most of the pump manufacturers operate through the gasoline companies and do not pay much attention to getting the cooperation of the filling station managers. A certain pump manufacturer is making remarkable strides in this direction and most of the gasoline station proprietors feel very kindly toward his pumps."

Similar expressions of opinion were heard from other gas station proprietors, but a great many feel that every station must make its own reputation and that a mere general assurance of their service and reliability by a manufacturer whom the public knows does not actually control the station, does not carry conviction.

Goodwill advertising for the oil industry

Oil companies were invited to make suggestions as to what evils, if any, exist in the oil industry, which might be combated by means of advertising. Very few concrete suggestions were advanced. One suggestion was that the recent campaign of a large oil company in explaining itself to the public had been very useful, but that there had been criticisms because it had spent such high sums on advertising while still holding up the price of gas. The opinion was expressed that anything that would explain the workings of oil companies to the public would be a good idea.

Proportion of gasoline sold to tourists

The proportion of gasoline that is sold to tourists varies considerably with the location of a filling station. Some of the stations enjoying good locations along the main highway estimated the proportion of business with tourists as high as 50%, though among the average run of garages and city service stations, the proportion of transient business was placed at around 5% to 20%.

Standing of Clark Pump Company

There is abundant evidence that the Clark Pump Company as well as its pump enjoy an excellent reputation among oil companies and station operators.

REPORT OF INTERVIEW OF A REPRESENTATIVE OF THE ADVERTISING
AGENCY WITH THE PURCHASING AGENT OF AN OIL COMPANY

The consumer advertising done by pump manufacturers, the purchasing agent declared, carries no weight with them in the selection of pumps and he thinks such advertising has been a waste of money. Pumps are purchased on a basis of quality, price, and service. Service, by which is meant the proximity of the pump manufacturer's factory or

warehouses and his ability to make quick delivery, was spoken of as a highly important factor.

The only consumer advertising campaigns on pumps that the purchasing agent mentioned as having noticed are those of A Company and B Company. He said that he could not see how this advertising could have done these companies much good, though he does think that it has served to popularize the visible style of pump. Accurate measure and the idea that the visible pump insures full measure to the car owner, have been emphasized in most of these advertising campaigns.

Practically all the pump manufacturers were said to advertise to the trade either in trade journals or direct by mail. The purpose of this is to acquaint the oil companies with the manufacturer's brand names, and also to influence independent garages and service stations to specify a particular brand of pump when taking on a new line of gasoline. In actual practice, very few garages request a pump by brand name. They usually ask for a certain type of pump, however, and there is a growing preference for the visible pump.

Where a particular brand or type of pump is requested by a dealer, the oil company endeavors to give him what he wants, though if it is some brand the company does not handle, it simply notifies him as to what it has, and he makes a selection from this list.

A request on the part of dealers for special brands of pumps is prompted largely by the activity of pump salesmen. One company was mentioned as being aggressive in going around to dealers and asking them to write to the oil companies that they wanted its pump. In fact, it writes the letters itself and has the dealers sign them. One oil company resented this practice and as a result would not do business with this pump company.

The purchasing agent commented on the growing tendency of oil companies to establish their own filling stations rather than to sell through independent dealers. The competition among oil companies is now so keen and price cutting is so prevalent, that independent dealers are constantly switching from one brand to another. For example, an oil company may install a pump for a dealer today and within a few months a competitor will come around and offer gasoline at a lower figure. The dealer then asks the original company to remove its pump and he takes on the other line. This frequent changing of pumps is, of course, very expensive to the oil companies as an installation costs considerable money.

Another evil practice in the industry is that independent dealers substitute and adulterate gasoline. The only way that a gasoline company can control the situation is to merchandise through its own station, and oil companies are adding to their own filling stations very rapidly. It was stated that in this section the—Oil Company opened about 300 new stations this year.

This company operates some stations of its own and in addition it sells to independent dealers.

Relative to the desirability of pump manufacturers' supplying signs with the pump, which could be erected about 100 yards in advance of a filling station, the purchasing agent said that the company now erects a large wooden sign near the station, and he thinks this matter is generally well taken care of by all oil companies.

A gasoline pump containing a rack or window in which accessories could be displayed would be desirable for use out in the country but would be of no value to city filling stations, as in the cities most people buy supplies and accessories from a service station or any accessory store. Tourists, however, have occasion to buy such items out on the road and a great many independent stations carry spark plugs, tires, and the like. At their own filling stations this company handles no accessories, dealing strictly in gasoline and oil, so such a pump would have no value there. It is the general practice of oil companies to handle only their merchandise at their filling stations as the profit on handling other items, merely as retailers, is very small, and it is not considered worth while to establish the buying machinery that would be necessary.

The purchasing agent thinks that during the next few years, the consumption of high-test gasoline will increase considerably.

At present the best market for high-test gas is in the North and West where car owners have more difficulty in starting their cars in cold weather. The purchasing agent thinks that eventually nearly all stations will handle both regular gasoline and high-test gasoline.

Due to the increased demand for kerosene, it is more practicable to market high-test gasoline than it was several years ago. When the market for kerosene appeared to be diminishing, as was the case until quite recently, the kerosene had to be sold at practically cost and it was desirable in refining crude oil to get as much off in the form of gasoline as possible. Due to the coal strike and the growth of the oil burner industry, the demand for kerosene has been growing and it is now possible for an oil company to distill high-test gas and get a larger percentage of kerosene, and still make as much money as if they were distilling primarily for gasoline.

A third form of gasoline which seems to be growing in popularity is what is called the doped gasoline, such as the Ethyl gas.

The purchasing agent does not think that any car owners observe the brand of pump from which they buy gasoline and he doubts if their interest in pumps would be aroused by advertising. So far as the oil companies are concerned, they would prefer to see the pump manufacturers keep quiet, as the oil companies are desirous of having the attention of the public focused on the brand of gasoline only.

So far as the purchasing agent knew, no pump manufacturer has conducted any consumer advertising designed to benefit the oil industry. He thinks it might be practical to do something along these lines, but he did not know just how and had no concrete suggestions to offer.

REPORT OF INTERVIEW OF A REPRESENTATIVE OF THE ADVERTISING AGENCY WITH THE MANAGER OF A FILLING STATION

This is a large filling station. It is under the individual control of the manager. The oil company leases out the equipment and makes the manager solely responsible for the expenses and operation of the filling station itself.

Car owners never express any interest in the various types of pumps used. There is about one out of a hundred that knows anything about the workings of a gas pump. They are unable to tell whether the pump is giving them accurate measure or not. In the dial system, the dial merely shows that gas is running out of the pump. This dial could be adjusted in almost any way so that it would not give an accurate indication of the amount of gas run out. The same applies to the bell system. When the buyer hears a bell he is merely hearing music; it is no indication that the bell is ringing at accurate intervals. Furthermore, on the visible pump there is a cup at the bottom of the visible tank so that while the customer can watch the gas running out, the operator is able to stop when it reaches the point right below the level of his visibility and thereby maybe save two quarts in every five gallons of gas.

To the trade, it makes a lot of difference whether a pump is well known and advertised. However, it is difficult to see how this advertising could have any effect on the public when they have no means of recognizing the performance of the pump.

When arrangements were made with the gas company to handle gasoline, no particular type of pump was requested. The C pump is the regulation equipment for the filling stations of this company in this section of the country. Possibly the C pumps in this station are the oldest in the city. They are accurate but are not easy to work. A newer model of pump would be preferred. The facts that the trade looked for in specifying a pump are: first, accuracy; second, ease of operation; and third, appearance.

The accuracy of the pumps has been questioned on several occasions. This usually happens through an error in measurement. The Ford car owners, who are the people who question most often the accuracy, have a stick on which there is a three-way measurement for square tanks, round tanks, and oval tanks. They usually get these various measurements mixed up so that they measure a round tank with a square tank measure, and then come to the station operator claiming that they have been cheated on gasoline.

The proportion of gasoline that is sold to transients is not more than four out of a hundred customers. The sale of gasoline, in these times of keen competition, is largely a matter of service. It is necessary for the service station to go out and build himself up a clientele. The building of this clientele is largely a matter of goodwill, and it is possible when a client is secured and satisfied with the service of a station that he will come again, again, and again. It is only on this basis that a station operator is able to remain in business.

Two grades of gasoline are sold. These are the general run gasoline and the so-called high-test gasoline. This station operator prefers not to sell high-test gasoline. The word high-test is not exactly accurate. The gasoline itself does not have a high pressure. A strictly high-test gasoline could be constructed which would blow the engine to pieces. However, the object of this Ethyl gasoline is to have the explosion exert a pressure on the piston rather than the sharp blow which results from the explosion of ordinary gasoline. This is the object toward which producers are working, an object which will be worth while. Whether this has been accomplished or not is a question. At the present time a high-test gasoline is a gamble as to whether it will give the results expected or not. A lot depends upon the engine, the way it is made, and the way it is adjusted.

The encouragement of motor travel by giving publicity to motor camping and touring would not have an advantageous effect upon the business of this filling station.

It would be absurd to try to explain to the public the difference between the various types of gasoline. Only about one person out of ten knows there is a difference in gasoline. It would be impossible to tell the type of gasoline which would be most beneficial for each car, and even if it was explained it would not be understood. Furthermore, in the trade there is so much discussion and variance of opinion that it could have very little effect. The salesman of a car tells the car owner one thing, the garage mechanic tells him another, the filling station man still another story. All these are at variance. The consumer does not know what to believe.

Urging the public to buy gasoline in larger units in order to break down the prevalence of the five and ten gallon order would be worth while. This is not a new idea. A good gas man never says: "What will you have?" He always says: "Shall I fill up the tank?" This type of advertising has already been done by one pump company. The difficulty in the request "Shall I fill up the tank?" is that it is hard to know just how much gas should be put in. There is very great danger of spilling. For this reason very few gasoline station operators try to sell a full tank. However, this pump company has issued a chart giving the capacity of every gas tank. Consequently, with this chart in hand, the man who operates the pump is able to do this. When a car drives up for gasoline he can look at the gas gauge and say that the customer has so many gallons and that the tank will hold so many more. When the request is made this way it is almost always possible to get the customer to have the tank filled.

There is no use in furnishing signs for a gas filling station. The equipment is distinctive and the signs would not be used.

Advertising, in a general way, the reliability of gasoline station operators would not be of especial benefit to this operator for it would be beneficial to all operators alike.

The idea of designing a pump with a display window in which accessories could be displayed is a good idea.

Another feature a manufacturer might have on his pump would be an adjustable card to show the price of gasoline. It need not take up much room. To change the card every time there is a change in the price of gasoline is a nuisance to the operator.

GENERAL POLICIES

Introductory

Before taking up the discussion of the specific methods of marketing and advertising Clark pumps, it is advisable to review the outstanding points developed by our investigation.

Outstanding facts of investigation

One of the most notable points brought out was that in spite of the indifference of car owners to gasoline pumping equipment they nevertheless almost unconsciously associate the pump with the brand of gasoline they buy and many think the brand name of the pump is the same as that of the gasoline.

A great many of the motorists interviewed stated that they were not interested in the type or brand of pump used, whereas in spite of this many of them expressed a preference for the visible pump, a considerable number were familiar with various brands of gasoline pumps, and most surprising was the number of car owners who stated that the quality of the gasoline, the oil company's service and such factors being essentially the same they would be inclined to buy from the pump nationally known and with its accuracy vouched for.

On the part of oil company officials the expected indifference to pump advertising was found, but when this was further discussed with them and analyzed, it is evident that this indifference or even hostility is largely because pump manufacturers have not approached their advertising problem from the right angle. They have without exception in their consumer advertising, endeavored to subordinate the gasoline to the pump, which, of course, is not only a mistake in that it antagonizes the oil company officials, but is also economically unsound.

The purchasing methods of oil companies, especially the larger ones, were found to be much as had been anticipated, but the investigation emphasized especially the importance of both major and minor executives in the purchase of this equipment and the necessity of reaching and selling these people all along the line.

The need for consumer interest

It is all very well to say that car owners are not interested in the brand of pumps from which they buy gasoline and consequently that they can be eliminated as a factor in marketing pumps, but, as a matter of fact, is this true? Take the case of the visible pump, for example. The visible pump consumer advertising certainly does not carry any appeal to the oil company officials. As an actual selling effort pumps are not unusually popular with the general run of filling station operators nor with oil company employees; nevertheless visible pumps are used today in probably greater amounts than any other single brand

and preference is often expressed for this brand of pump by the station operator. All this has been brought about not because the public actually demands visible pumps but because, for one thing, car owners in many parts of the country have been educated to prefer visible pumps, and this company has capitalized strongly this preference by identifying itself with this type of pump only. Furthermore, this pump is by far the best known to the motorist and as limited as this actual knowledge is, it serves the purpose. Many station operators prefer it because they feel that the public know it better than other pumps and that on this account it is instrumental in drawing trade from their rivals. Oil company officials buy it because of its price and the fact that it is brought to their attention more than any other pump, not only by the manufacturer himself but by the filling station operators and by a limited number of car owners. In spite of the fact that pump brand consciousness was very small, nevertheless brand consciousness for the visible pump made by your competitor is so large in comparison with its competitors that its purpose is served and it stands out from the rest of the field.

Of course, we realize that oil companies are desirous of buying the best equipment possible at the cheapest price but in these days of intense competition there are more complications. Even more important than price is the effect of any equipment on the service rendered to the car owner, because today service is a big factor in the operation of filling stations. A half dozen varieties of pumps may be so alike in type and mechanical qualities that there is little to choose between them, but if car owners who take any interest in pumping equipment are convinced that one of these brands is more accurate, or speedier than any of the others, that brand will be directly or indirectly favored by them.

Furthermore, if there is no actual feeling of this sort on the part of car owners, but if the oil company officials believe that this feeling does exist in some cases, the same result is obtained and the pump so favored becomes the leader.

To sum this up, today there is such an interest in all details, especially in the automotive field, that points which were of no interest a few years ago are matters of importance now. Of minor importance it is true and not perhaps often the deciding factor in a purchase, but nevertheless necessary in the strenuous sales efforts of today.

For example, probably not many car purchasers buy a Jordan because it has Timken axles, or a Durant because it has Hayes wheels, nor do they purchase a Cadillac because it has a Fisher body. Yet any one of these things is often a deciding factor in the purchase, and they all tend to make the finished product more desirable than its competitor.

The market for pumps

The market for gasoline pumps covers the whole United States, although the most desirable portion consists roughly of the northeast quarter, which not only contains the bulk of the population, the

majority of the motor cars, and most of the oil companies, but fortunately is the section most adequately covered by you in your present sales efforts.

Too much concentration of distribution has an element of danger in it. All parts of the country are not always in the same state of prosperity due to various peculiar sectional conditions. Likewise sectional peculiarities are often expressed in radical or undesirable legislation as, for example, the practice of prohibiting the piston pump and requiring the use of the visible pump in some states in the South and Middle West. Finally, in order to obtain as much consumer acceptance or brand consciousness as possible in the case of pumps, it is advisable that your distribution be widespread and car owners should be told about your pumps throughout the country and not in a few sections only.

National advertising

Your present distribution, though national to a degree, is territorially spotty. Your sales efforts actively cover a portion of the country representing approximately two-thirds of its population and your sales influence extends considerably more than that.

While it is true that you might concentrate on such localities or sections of the country where sales efforts would be the most convenient and sales resistance the lightest, there is danger in this policy as we have just pointed out.

National advertising will guard against these difficulties. It will permit you to reach all oil company officials throughout the country, thus adding to the prestige of your name and building up an introductory appreciation of your service and ability to render it which is the big talking point of your salesmen. It will pave the way for the introduction of your sales representatives and make their selling efforts easier and more quickly brought to a successful conclusion.

What national advertising will do

Let us briefly enumerate the things which national advertising has done for manufacturers somewhat similarly situated, and what it will do for you.

1. Influence oil company executives from the president down to the minor officials.
2. Influence car owners, giving them a knowledge and appreciation of the desirable qualities of Clark pumps which cannot help but react to your advantage upon the officials of the oil companies, your customers. This has been proven in the case of your competitor and the conditions resulting from his advertising campaign.
3. Build up confidence in the accuracy and other desirable qualities of Clark pumps and in the ability of your company to render the best of service.

4. Give your salesmen a powerful tool to help them in their selling, and make them take a greater interest in their work and a greater pride in the institution which they represent.
5. Gain the goodwill of oil company executives and filling station operators.
6. Give the gas station operator a feeling of confidence in Clark pumping equipment.
7. Establish definitely in the mind of the public your policy of quality, accuracy, and service, both as to visible and all-metal types of pumps.
8. Increase your sales, thus reducing your selling cost and increasing your profits. It will promote the sale of the gasoline of companies who use your equipment for the most part because it will show the public that not only are they desirous of distributing the best quality of gas, but also that they leave no stone unturned in their efforts to render good service through using admittedly reliable and accurate dispensing equipment.

Permanent continuous advertising

Probably the most important factor in the determination of a consistent policy in your advertising is to place it on a basis of continuity and permanency. The manufacturer who regards advertising simply as a force to produce business this year or next year is shortsighted. Advertising properly utilized as the inherent policy of the business is an insurance of the permanent and steady growth of that business 10, 20, or 30 years hence.

The broad-visioned way in which your advertising appropriation can be regarded is well expressed in the following words of an executive of a well-known national advertiser:

We consider the advertising expenditure as a permanent matter such as the expenditure for factory buildings and other permanent assets of a more tangible nature than the goodwill that advertising helps to build. The buildings we are erecting here are not planned to provide for this year's production only, but to provide for the production of future years as well. Neither are they designed to meet conditions which suddenly arise this year but they are built according to plans which were formulated long before the actual date of them arose, and they were arranged not only to fit in with existing plant construction but also to harmonize with the plans we expect to have in the future.

Time element

In other words, advertising does not work wonders over night. The element of time is an indispensable factor. It is continuous effort that makes successful advertising. You will find that your advertising will be producing by far a more tangible result at the end of twelve months than it will at the end of the first six months and at the end of the

second year the effect will be much more noticeable than at the end of the first year.

Dominant adequate advertising

In addition to following a permanent, continuous advertising policy, it is also necessary to engage in dominant and adequate publicity. It is well known that the big successes in advertising have been obtained by those who have used space in a dominant and adequate way. And it is particularly true in these days of such widespread recognition of the course of advertising and the huge scale on which advertising is being utilized by manufacturers in the greatest variety of industries. The only way in which a firm that has the element of leadership in it—and desires to secure ultimately a considerable percentage of the entire business done in a particular industry, can obtain its goal, is through the use of dominant, adequate, and continuous advertising sales efforts.

Small space can be used advantageously where immediate selling results for a product of small initial cost are desired. Such products require very little time or consideration before they are purchased, but in the case of a product such as yours, where not only are considerable time and much thought given but also is expended a large amount of money, another problem entirely is faced. It is the building up of prestige, implanting in the prospect's mind the desirability and quality of your product and also your high standing as a manufacturing organization in your industry.

In determining your advertising appropriation the danger to be guarded against is under-spending. Just as frequently it is true that the last 10% of business is what makes the difference between profit and loss for a manufacturer, as it is true that the last 10% of an advertising campaign is often what marks the difference between 100% efficiency and only partial efficiency of the entire advertising campaign.

Objects of the campaign

Having considered then the necessity of deciding upon and rigidly executing a consistent advertising policy, and having shown the importance of a permanent, continuous campaign and the significance of the time element, let us now take up the specific objects that you wish to accomplish by your advertising efforts. As we see them these objects are as follows:

1. To Secure Quickly an Adequate Distribution of Your Gasoline Pump

Your distribution and sales show considerable concentration in three definite sections of the United States. The campaign which we recommend is cognizant of your expressed desire to distribute the volume of this part of your business more equitably, and will be an immediate influence for obtaining more adequate national distribution.

2. *To Build up a Greater Interest and Favorable Reaction to Clark Pumps throughout the Oil Marketing Industry*

Our investigation has shown that, as a rule, among oil company executives there is little appreciation of pumping equipment except as a mechanical detail which should not be a matter of any concern to the car owner or station operator. Any successful advertising campaign for Clark pumps must interest the oil company officials by helping increase their sales and not merely try to play up the importance of the pump.

3. *To Reach All People Who Influence the Purchase of Gasoline Pumps*

While, generally speaking, the sales manager and the purchasing agent are the most important factors in determining the brand or type of pump purchased, there are also many cases where both the higher and also the minor officials of oil companies play an important part in this matter. The type of pumping equipment used is influenced by so many variable conditions, especially when large organizations are involved, that, as a rule, several individuals are instrumental in the routine of buying them. With small oil companies, as a rule, one or two people influence the buying, but there is a wide range of intelligence, training, and reading habits of these individuals.

In other words, if the maximum results are to be secured, the advertising must be designed to reach and influence all the different classes of people that have a voice in buying gasoline pumps.

4. *To Secure a Larger Volume of Business Per Customer From Your Present Customers*

It has been shown that for one reason or another there are many of your customers who are buying only a comparatively small number of Clark pumps. While you cannot and do not expect a customer to buy Clark pumps to the exclusion of any other brand, nevertheless, if your pump is the equal of, or superior to, its competitors, the initial small purchases by new customers should be followed by repeat orders larger in volume. If this repeat business is not forthcoming, because of prejudices on the part of filling station operators, advertising plus the personal efforts of your sales force will overcome much of this. If it is because of a price differential in favor of other companies, advertising and the brand consciousness thus aroused can to a great extent remedy this situation also.

5. *To Create a Consumer Consciousness or Consumer Acceptance For Clark Pumps and Establish in the Car Owner's Mind Definite Reasons for the Superiority of These Pumps*

You may ask, "What is meant by consumer consciousness and how can it operate in connection with a product such as a gasoline pump which often loses its identity?" This means that you wish to secure for your business a favorable acquaintanceship with all car owners who may come in contact with your products. You

want to bring about the condition that wherever gasoline is sold the majority of the car owners will immediately think of your pump as the most accurate, speedy, serviceable, and dependable method of dispensing gasoline that there is. The far-seeing manufacturers in other lines who have adequately utilized the power of advertising to bring about this state of mind and thus have created consumer consciousness for their products, are the ones who have developed really great businesses.

Specifically, what will the accomplishment of this object of the campaign mean for you? It will mean that you will get many car owners to realize that Clark pumps are the most desirable means for accurately and speedily supplying them with this product, and although it is not likely that any of these car owners will be brand conscious to the extent that they will refuse to buy their gasoline from any other pump than a Clark pump, they will, however, consciously or unconsciously favor the reputable brands of gasoline with which your equipment is identified. It is true that in most every car owner's mind there are several well known brands of gasoline, which he considers just about equal in quality. Adherence to one brand is very often determined by minor considerations, as for example, the convenient location of service stations, the quality of service rendered there, or the pleasing personality of the station operator. Many other factors are often as important as his opinion of the quality of that particular gas. When the important factors are essentially equal in the case of two or more brands of gasoline, the car owner will let one of these minor factors become the deciding point as to which brand he will buy. This has been proven in parts of the country where car owners have specifically demanded the visible pump, in spite of the superiority of the all-metal type.

Insuring future market

Another general or permanent function of advertising is in insuring future markets. At the present time you, in common with many other manufacturers, are enjoying a gradual increase in your sales volume. But this condition may not always last. Market conditions may undergo a change. The surest means of guaranteeing an ever increasing volume of business is by starting now to create through advertising a favorable reputation for your pumps among both the car owners and the oil company officials who purchase them, which will insure their preference for Clark pumps.

Purpose and type of advertising recommended

In order that your advertising efforts may fulfill their proper function of stimulating and aiding your sales force and lessening sales resistance, we offer briefly the following general recommendations:

1. A national advertising campaign to build up favorable consumer consciousness in a way not objectionable to oil companies

and which can be made a powerful factor in increasing your sales to all oil companies and, in fact, aiding the sales of your customers, the oil companies themselves.

2. Adequate identification of your product in so far as it is possible without conflicting with the prejudices of your customers, the oil companies, in order that oil companies may take full advantage of the preference for Clark pumping equipment, which will result on the part of the car owning public.

3. Specific material for your customers, the oil companies, designed to help them with their problems and at the same time build up in their consciousness an appreciation of the desirability of Clark pumps and the leadership of the organization manufacturing them.

4. Specific material provided for influencing the car owning public, whose preferences in the last analysis determine the type and in many cases the brand of pumping equipment used, in order to build up a brand consciousness and ready acceptance of Clark pumps.

The chief gain from such a campaign will be a greater interest and a more favorable attitude toward Clark pumping equipment by oil companies, gas station operators, and an appreciable brand consciousness or brand acceptance, on the part of the car owning public. Equally important, and perhaps even more important, will be the checking of a general unfavorable attitude toward the all-metal or piston pump, which will result in both this and the visible type being judged by the public on their true merits, and will be a great help in warding off more unfair legislation pertaining to oil dispensing equipment.

This campaign will react on sealers of weights and measures, government and underwriters' officials as individuals, and should produce as favorable results as a limited campaign directed at them specifically.

PRODUCT AND IDENTIFICATION

One of the most important problems which you face is the satisfactory identification of your pumps, and we realize that we are not telling you anything new in pointing out the difficulties in the matter of proper identification of such a product.

Disadvantages in present methods of identifying your pumps

The manufacturer who holds to one definite type or style of pump, only partly solves the problem, and he encounters the added difficulty of satisfying those customers who demand a pump design distinctly their own.

You have noted the use of signs attached to pumps and know that while this is in theory a desirable method of identification, in practice it has a number of disadvantages. For example, the ease with which it can be and often is removed, and also the fact that although many car

owners notice the pump, first to determine the brand of gas to be purchased, and secondly, perhaps to check up on it while their tank is being filled, they, nevertheless, very often overlook this sign because it is not an inherent part of the pump itself.

The painted monogram or decalcomania is easily painted out and usually is painted over comparatively soon in the process of keeping the pump attractive and bright. A very desirable step in advance is the one you have recently taken, that of fastening on a monogram cut from sheet brass, but although this can be painted over and still be seen it loses much of its value as an identifying mark when this is done. It also has the disadvantage that it can be readily removed from the pump casing without leaving any trace.

The printing of the manufacturer's name on the dial inside the numbers showing the amount dispensed is desirable in its position but it is so small and hard to read that comparatively few motorists will make a successful attempt to read it. This, however, is a logical place for such a mark because it is here that the interest of the purchaser of gasoline is directed.

A monogram at the point where the hose joins the pump though usually in sight is seldom noticed.

Some of the manufacturers cast their name in the casings of their pumps in comparatively small letters which are almost impossible to read. In fact, a number of station operators interviewed insisted that they did not know the name of the pump they were using, in spite of the fact that they were practically within reading distance of the manufacturer's name displayed in this manner.

Standard monogram or name design

You have for some time used a very attractive and adaptable name plate which can be placed in a number of positions on your pumps where it should not interfere with the desires of your customers in any way, and yet be readily recognized by even the mildly interested car owner.

It is comparable in a way to the G. E. of the General Electric Company, which has become a mark of quality. Many people who do not realize what the letters G. E. stand for do feel that it is a guarantee of a well built, dependable piece of electric equipment.

It seems desirable that regardless of any other forms of identification you make your name plate the important part of your standard name design and have it appear in several places if possible on your pump. For example, it can be maintained at the point where the hose joins the pump, as you now have it and also at the hose nozzle, and at both these points as large as possible. It is also desirable that it appear on the dial showing the number of gallons pumped, and at this point it could best be put in a different color, filling up some of the white space on this dial.

In the case of visible pumps it could be frosted in the glass of the tank or worked into the wire lattice protecting the tank. In fact, there

may be several other places where your experience will indicate that it would be advisable to place this name plate.

The name Clark should also run up and down the vertical gallon markers on the all-metal pump.

In order that this name plate shall appear on all pumps except those where it is especially stipulated that no identifying marks are to be used, and so that even when the pump is given a fresh coating of paint, or where an attempt is made to remove it, it cannot be entirely obliterated, we recommend that you have this name plate cast in the pump casing in letters about one-half inch high.

Your consumer advertising, your trade advertising, and all direct-mail and other supplementary material should show this Clark name plate. In fact, every possible attempt should be made to familiarize the public with it and establish it as the hallmark of accurate, dependable pumping equipment. It would soon become like the G. E. of the General Electric Company, the triangle of Armco Iron and the U. S. of the United States Rubber Company, a reminder of quality, accuracy and dependability, yet it would not conflict with the signs of your customers nor should it incur their hostility. In connection with an advertising campaign such as we are recommending, it would serve as added proof of the desire of these oil companies to give their customers not only the best gasoline but safeguard it with the most accurate, dependable equipment possible.

Additional Identification Marks

It is not sufficient that your pump be marked with some sort of identification that is noticed only upon relatively close examination of the pump. It must be marked in some way that will enable the motorist to recognize it even when he first sees the pump at a distance. This identification must be made in such a way that it will not detract from the trade-mark or display of the brand of gasoline dispensed.

The best method for accomplishing this purpose seems to be a distinctive hose. We recommend that you adopt a black and white checkered hose for all of your pumps and that you feature this in your advertising as soon as you can feel assured that most of your pumps already installed in filling stations are equipped with it. There is danger in starting this advertising of the checkered hose previous to the time when most of your pumps are so equipped, because it will call attention to a distinctive feature of your pumps which will not be encountered often enough by the motorist to be impressive. On the contrary, it will advertise your apparent lack of distribution and give the motorist the feeling that Clark pumps are comparatively little used.

This distinctive hose we feel should be adopted as soon as possible and supplied for replacement at every opportunity and it should be featured in the advertising just as soon as the conditions outlined above will warrant it.

We, of course, recommend that before adopting this distinctive mark you ascertain through the proper legal sources the extent to which

you can secure protection of this as a distinctive trade-mark or form of identification.

CONSUMER ADVERTISING

Introductory

An outstanding point in connection with the marketing of gasoline pumps is the lack of brand consciousness on the part of car owners.

Further complicating this situation is the absence of uniform methods of purchasing such equipment on the part of the oil companies.

In this part of the plan we will take up the specific recommendations which we propose for accomplishing the above purpose.

Advertising Activities of Competitors

It is an interesting fact and one worthy of detailed study, that of all your competitors the one which has enjoyed the most rapid growth in the past few years has been the most consistent, in fact, the leader in consumer advertising, and furthermore this competitor enjoys by far the greatest brand consciousness on the part of the car owner.

The following expenditures in national consumer advertising have been made by some of your competitors during the past six years:

	Company A	Company B	Company C	Company D
1920.....	.....	\$ 52,875	.....	.....
1921.....	.....	56,000	.....	.....
1922.....	\$ 29,500	70,000	\$12,446	\$51,200
1923.....	59,500	24,000	14,000	.....
1924.....	117,000	24,000	5,250	.....
1925.....	143,000	.....	21,000	.....
	\$349,000	\$226,875	\$52,696	\$51,200

It is interesting to note that all of this money has been expended in the *Saturday Evening Post*.

We are told by the Curtis Publishing Company that your most active competitor, who has been in the pump business for 5 years, started with a production of less than 200 pumps per year and in 1925 had reached a volume of over 3,000 pumps per month.

However much importance we assign to the fact that this competitor's pumps have been sold on a lower price basis, we must realize that standardization has not been a favorable sales factor in a business where a specially designed pump is so important. This has probably been offset by the fortunate tie-up of this competition with the increasingly popular visible type of pump.

Unfortunately it was not possible to obtain similar indication of the success of the other competitors' advertising although our field investigation showed evidence of some benefit in the form of brand consciousness.

Taking advantage of consumer brand consciousness

The present situation in the field of gasoline distribution is such that each gasoline marketer is looking for every possible aid for increasing and improving his service to the car owner.

It is possible to make the gasoline pump an even greater retail selling help than it has been in the past through constructive consumer advertising.

Inasmuch as we all realize that it is the brand of gasoline which is important in the motorist's mind and not the method by which he gets it, advertising which popularized the pump at the expense of the gasoline brand is not sound. It is to a great extent wasted, and its effect on the trade is to antagonize purchasers rather than to make friends for this particular product.

However, in spite of the unsoundness of this type of advertising, considerable advantage has accrued to your competitors who have carried on consumer advertising. A certain amount of brand consciousness and a large amount of type consciousness in the case of the visible pump has been created, which has worked largely to your competitors' advantage.

Our recommendation is that you take full advantage of the tendency toward brand consciousness of pumps which has been created but reverse the method by making the pump secondary to the brand of gasoline. Show the motorist that the leading and outstanding distributors of quality gasoline use the Clark pump because they are outstanding in their field, because they are accurate, speedy, and dependable. In that way you will not force, or appear to be trying to force, a situation more or less hopeless, where the motorist is expected to buy the gasoline because it is dispensed by a Clark pump. But you will be building up in the car owner's mind a favorable impression towards your pump and a desire to favor the company whose product is not only of good quality but which he knows favors reliable, accurate dispensing equipment, the Clark pump.

It is hopeless to expect to persuade a motorist to drive along until he finds a Clark pump from which to buy, regardless of the brand of gasoline, but it is very possible and, in fact, probable, that under the plan which we are submitting you can cause many car owners to favor one of a few brands of gasoline of known quality because he, the motorist, knows that the distributing company uses the best in dispensing equipment. He may not consciously look for a Clark pump, but the sight of its well-known monogram will in a great many cases be the small factor which decides him in favor of that particular brand of gasoline.

Regular customers

In the average city filling station it is estimated that usually from 80% to 95% of the trade is from regular customers. Probably the most important factor in determining their choice of a filling station is its location, because it is convenient for them to fill their tank at either the beginning or the end of their usual trip. But this matter of location is, as a rule, shared by several gasoline distributors. Usually one com-

pany's station is not so much more convenient than those of one or two others which distribute a gas equally good, that it cannot be offset by other minor points. The next important point is the service rendered at the filling station. And again the outstanding companies in the field differ so little in this respect that there is not much to choose between them. The accuracy of the measure of gasoline dispensed and the honesty of the employees are important points also.

As we have previously pointed out, we do not expect that the motorist who is sold on one brand of gas is going to change to another just because the filling stations he passes regularly use a Clark pump. But, as is true in many cases, suppose that through the experience of his friends and acquaintances and the oil companies' advertising, and so forth, he is convinced that either brands are equally desirable brands as far as their intrinsic worth is concerned. Suppose, for example, the more convenient location of the first brand is offset by the superior service of the second brand. Then it is some minor factor that is going to decide which of the two brands of gas he buys. In such a case it is not at all unreasonable to suppose that, having casually learned that the filling stations of the second brand are users of a well-known, accurate, dependable, and speedy brand of dispensing equipment manufactured by the leaders and pioneers in this field, this fact, unconsciously perhaps, would nevertheless influence his gasoline purchases.

In the matter of wayside or country stations this might be even more apparent. If a motorist is not in his accustomed territory, he does not know the station operator, and perhaps has some doubts as to getting full measure. He passes a station showing the sign of an oil company which he has been told through advertising uses an accurate, dependable pump. What is more natural than to stop and fill up there rather than wait and buy elsewhere where he knows no more in favor of the gasoline itself and nothing about the dispensing equipment?

Popularity of the visible pump

The visible pump does not owe its great popularity to chance alone. It had many obstacles to overcome at the start and these were overcome to a great extent by advertising. But in some parts of the country this type of pump has now become so popular that it is required by law, notably in the South and the West.

In the New England states, however, the situation is different and the piston pump is much more popular.

You cannot afford to identify yourself exclusively with either type but should be recognized as the manufacturer of good reliable pumps, whether visible or all-metal.

You can convince the car owner that it is the ability to make an accurate, dependable pump that counts, whether it is the piston or visible type. You can show him that the piston type is mechanically accurate and more difficult to tamper with, and you can build up an appreciation of the merits of the piston pump that should make it equally as desirable as the visible pump.

Your advertising appearing in every part of the country can feature both the visible and the all-metal pump, thereby satisfying any locality where either type is unusually favored and yet where the visible types are so tremendously popular, it will gradually have a beneficial effect upon the attitude toward the all-metal pump, establishing you in the minds of the public as well as the industry as manufacturers of accurate, dependable dispensing equipment and you can accentuate the superior qualities of the piston pump without detracting from the visible type and thereby losing your sales volume in this class of products. In other words, you can identify yourself with both types and be in a position to take advantage of a decided trend of public feeling in either direction.

Your market

We have already, in a preceding part of this plan, touched in general on your potential market and its national scope. But at this point we should give it more detailed consideration especially in relation to your proposed advertising campaign. Following are tables showing a comparison of the classification of oil marketers on your own mailing list with that of the *Gasoline Topics Magazine* where these companies are classified by the number of trucks they operate.

These tables show that you have covered through your mailing list and sales efforts nearly all of the desirable prospects in this field and especially those highly desirable prospects, the larger companies, and it also shows that over 90% of the gasoline pumps are purchased by the first four groups of oil companies, although these four groups make up only from 20% to 25% of the total number of companies in the field.

Nevertheless, the small companies are widely scattered throughout the country, they are in many cases outstanding in their own localities, and their combined purchases are not only large but their distribution as users of any particular brand of pump makes them an important factor in keeping that brand of pump in the minds of the filling station operators if not of the motoring public.

Furthermore, these small companies are imitators of their large competitors in their merchandising methods, and they are also on the lookout for any merchandising or sales advantages which they can obtain over their larger competitors.

The large important oil companies are in a better position to dictate to the owner of a garage or a roadside stand, and tell him what pump he must use, but as we have found from our survey the smaller companies are more inclined to heed the demands of the filling station operator when he specifies a certain type or brand of pumping equipment.

For this reason it is important that you intensively cultivate this field of small oil companies even though you cannot afford to give them their relative amount of attention in intensive sales work. To cultivate them properly you must reach them not only with sales arguments showing the superiority of Clark pumps and the better service they can obtain from them, but also you must show them that you are making

the car owners, their customers, appreciate the superior points of your pump without in any way detracting from their gasoline and that you are also helping them sell their gasoline and making your pump serve them in this respect even better than those of your competitors.

The extent of your market is governed by other conditions beside the number of retail outlets estimated to number about a quarter of a million.

CLASSIFICATIONS OF OIL MARKETERS
POTENTIAL CLARK CUSTOMERS
CLARK MAILING LIST

Group	Number of Oil Companies	Annual Pump Purchases	Average Annual Purchases	Percentage of Total Pumps Purchased	Percentage of Total Oil Companies
I	7	1,000-5,000	4,000	20%	.1%
II	21	500-1,000	600	10	.4
III	500	100-500	125	40	10.0
IV	750	25-100	50	25	15.0
V	3,722	1-25	2	5	74.5
	5,000			100%	100%

GASOLINE TOPICS MAGAZINE

Group	Number of Oil Companies	Size of Truck Fleets	Average Size of Truck Fleets	Percentage of Total Oil Companies
I	75	Over 100	608.0	1%
II	125	50-100	72.0	2
III	300	25-50	34.0	4
IV	1,000	10-25	15.0	14
V	5,500	1-25	3.7	79
	7,000			100%

First, there is the normal growth in the number of filling stations, estimated at from 10% to 15% increase a year, or, in other words, a little under the increase of gasoline consumption, which is from 15% to 25% a year, an average of 20% for the past four years.

Then, there is the replacement of old pumps, always an important part of the potential market because of refinements and improvements in pumps and finally there is the increase in pumps per station because of high-test and Ethyl gasoline, which many companies are adding to their regular grade.

The need for prompt action

It is admittedly not necessary to advertise extensively to get and maintain your business. Nevertheless, consider for a moment what is happening elsewhere. One competitor is increasing his advertising appropriations every year and his business is increasing even more

rapidly than his advertising. The popularity of the visible pump has increased greatly, largely through the advertising and other educational advertising by oil companies and pump manufacturers. It is conceivable that if this continues and the comparatively small consumer consciousness shown in our field of investigation increases, there will be a distinct consumer demand for visible pumps in parts of the country where the all-metal is now popular or in equal favor.

As the sentiment for visible pumps increases, this competitor profits most under the present existing conditions because it is the only concern building up brand consciousness in the mind of the car owning public and identifying itself closely with the visible pump.

Therefore, it makes little difference, in the last analysis, whether it has been this advertising or standardization and lower price which has been responsible for their big increase. The fact remains that your competitors in visible pumps have made marvelous strides in their production and sales, and in doing so they have succeeded in building up practically the only real consumer brand consciousness that there is in this field. Even though this is not strong at the present time, it is growing and will continue to grow in proportion to their sales and advertising efforts.

Insuring for the future

You cannot afford to sit still and let these efforts of your competitors progress unchecked. Nor can your customers, the oil companies, ignore it unless they are willing to face the possibility of being obliged to buy the advertised visible pump of your competitor or a similar type of pump to a great extent in the future whether they want them or not. Neither do most of the oil companies want to have the visible pump made compulsory everywhere.

The oil companies tell us that they do not want to confuse the issue by having the motorist give consideration to the pump instead of the gasoline and this is very good logic provided none of the pump manufacturers would attempt to popularize their pumps by advertising. However, some of them are doing so in one case with considerable success, and if not given consideration and guarded against by the oil companies, especially the larger concerns whose equipment is more or less standardized and who buy largely from one or two pump manufacturers, this consumer interest which is slowly being awakened is going to prove decidedly embarrassing to them.

Therefore, it is both wise and economical to anticipate such developments and do something to counteract whatever may prove detrimental in the future. This can be very readily and decidedly well done by the Clark pump manufacturer, with beneficial results to its customers.

Selection of media

The successful advertising effort of one of your competitors alone indicates that in your case some form of consumer advertising is certainly needed. If you expect your business to increase year by year and become the leader of this field you must make the public acquainted

with your product, and, furthermore, oil company officials, if they think your pumps are favorably known to motorists, will buy them far more readily than other available brands.

In considering the methods which you might pursue to augment your sales efforts effectively through advertising, these three general lines of procedure offered themselves.

First—A trade-paper and direct-mail campaign to oil company officials.

Second—A newspaper campaign in the more important centers throughout the country.

Third—A national advertising campaign in magazines.

The first effort, that of trade papers and direct-mail work on oil company officials, is the method you have been pursuing. Unfortunately it is not able to compete successfully with your competitors' intensive national advertising. Furthermore, it does not get the attention of these executives to the degree that a campaign directed at the consumer or the public does. That is, oil company executives are more interested and more curious to see what any pump manufacturer is telling the car owning public than they are in what the pump manufacturer is trying to tell them, except at the particular time when their minds are on pumping equipment preparatory to buying.

The second method, newspaper advertising in selected cities, would prove too costly to be economical in your case. You not only want to cultivate those territories where your distribution and sales are good but you also want to direct your efforts to certain territories where your sales are unusually low. This is a desirable safety precaution, as we have already pointed out. To conduct such a campaign and distribute it adequately over the part of the country you should cover would be far too costly. You must reach oil company officials wherever they are located, because they are the people who are going to buy your products. But you also need to tell your story to car owners all over the country and you want to distribute these messages approximately in proportion to the number of automobiles owned and gasoline consumed in the various sections of the country.

In order to accomplish economically the purpose we have just outlined, your advertising should reach oil company executives from the president down, and filling station operators, and car owners of all classes.

It has been proven that business executives will overlook advertising in their trade papers or mail pieces directed specifically to them and yet will observe and comment on the same thing in national magazines or newspapers directed at the consuming public. In other words, it is human nature to pay scant attention to many things that are told us, especially those which we think we already know, but to "listen in" through curiosity on the things which are being told the general public or our customers and which partially concern us.

It is this trait in human nature, so often shown in business, that we have planned to take advantage of by telling the Clark story ostensibly to the motorist but in such a way that those who are vitally interested, the oil company officials and filling station operators, will, through curiosity, if for no other reason, read this advertising.

For this purpose we must use publications which reach these factors as well as the car owners, publications which they are accustomed to look over in order to see what their competitors and the manufacturers of allied products are doing in the way of advertising.

The Saturday Evening Post most desirable

In approaching this part of the problem we first selected a number of national magazines which appeared to fulfill your requirements very satisfactorily. We then analyzed each one thoroughly in order to determine just which of these publications would accomplish the results which we had in mind, at the same time keeping before us the fact that wherever such advertising would appear it must be sufficiently dominating to accomplish the purpose for which it is intended. As a result of this thorough study we came to the conclusion that one national publication, the *Saturday Evening Post*, will economically and satisfactorily accomplish the desired end because of:

I. *The outstanding circulation of the Post and its advantageous distribution*

With its circulation of nearly 3,000,000 the *Saturday Evening Post* reaches that class of the motoring public to whom you would naturally go with your sales story. A survey conducted some time ago by a group of national advertisers among a number of representative manufacturers covering 3,000 executives, 6,000 clerical workers, 6,000 factory workers, or, in all, a total of 15,000 homes showed that among executives 67% read the *Post*, of the clerical workers 48%, and of the factory workers, 31%.

In all, 28 leading publications were studied, and the *Post* led the nearest publication in its class by a wide margin.

II. *The nation-wide distribution of the Post and the quality of its circulation*

The *Saturday Evening Post*, although its circulation reaches every state in the Union, is strongest in that part of the country where automobile registration is largest, and population the most concentrated. It therefore fits ideally into this situation because it not only takes your message to that part of the country where you now enjoy a satisfactory volume of sales, but it also reaches those sections in which your distribution and sales are weak and it reaches them in proportion to their potential worth.

III. *The strong influence of the Saturday Evening Post in the automotive field*

The *Saturday Evening Post* has often been called the greatest automotive trade paper. All the leading makes of cars are at pres-

ent, or have been in the past, advertised in the *Post*. Most of the leading automobile accessories are represented there and the *Post* has been used extensively by oil companies whose distribution would justify it. In 1925 the *Post* carried 76% of the automotive utilities' advertising in 32 leading national publications, or more than 9 times that of all the other weeklies combined.

Because of this leadership in the automotive field and the advertising activities of many of the oil companies, the *Post*, as a rule, is carefully looked over by oil company executives in order to see what is being done in their field and by their competitors. For this reason your advertising appearing in the *Post* will reach the majority of oil company officials, as well as having a large circulation among car owners.

We have already shown from a survey conducted among a large group of representative manufacturers that the *Saturday Evening Post* was read by approximately 2,000 out of 3,000 executives of these companies.

We have every reason to believe that this proportion holds good throughout the executives of oil companies. In fact, when we realize the standing the *Post* has in the automotive trade and the interest taken in the *Post* by the leaders in the automotive field on this account, we are inclined to feel that this proportional coverage is higher. However, with this high executive circulation and the added circulation among clerical and factory workers you can feel assured that the *Post* will bring your message before these highly important factors whom you wish mostly to influence.

IV. *The past and present use of the Post by your leading competitors*

We are not attempting to put advertising on a competitive basis, nor do we feel that it is necessary to imitate a competitor, but in your present situation it would be folly to shut your eyes to the advertising activities of other pump manufacturers, especially when some of these activities have resulted in practically the only brand consciousness worthy of consideration in this field and a strong type consciousness and preference for the visible pump. These factors make it necessary to analyze your competitors' advertising activities and plan your own accordingly.

Four of your competitors have used the *Post* for their consumer advertising. Our investigation shows some consumer brand consciousness for all and considerable in the case of one. One of the things your advertising campaign should and must do is to counteract this impression among motorists. To do this properly it is logical to use the same media that your competitors have used and familiarize the same motorists with the Clark pump and its qualities of accuracy and dependability.

A detailed study of the *Saturday Evening Post* circulation compared with your sales territories shows over 2,000,000, or 70%, of the *Post* circulation in these territories.

If we add to that the circulation in Ohio, Missouri, Texas, and the remaining half of Oklahoma, territory which it would seem logical for you to include with any immediate extension of your sales efforts, we find there not only almost 2,500,000 circulation of your *Post*, or about 80% of its total, but also we discover that this territory contains approximately:

- 80% of the total population of the United States
- 90% of the total United States personal income tax returns
- 80% of the total manufacturing establishments
- 85% of the automobile registration of the United States
- 85% of the automobile garages in the United States

In other words, you will be sending your message to those sections of the country which offer immediate opportunities for increased business and where you already have a substantial volume of sales, and, for the most part, adequate sales facilities. At the same time you will be devoting a minor but relative portion of your advertising efforts to territory less important from a sales viewpoint, but, nevertheless, sections which should be covered by your advertising in order that its national country-wide character may be emphasized.

Other manufacturers using the Post

We have already mentioned in some detail and you are, of course, familiar with the advertising done by your competitor in the *Saturday Evening Post*. But there are other examples, some with problems very similar to that which you have to solve.

Barrett Company—Tarvia

This company, selling a product used for road building, deals with county and city officials and contractors who are also politicians. The Barrett Company has used the *Saturday Evening Post* every year from 1922 through 1926 for the purpose of reaching these county and city officials indirectly through the voters who use the roads. The success and continuation of this advertising is an indication of the results to be obtained from such an advertising plan as we are proposing to you.

It is true that the individual citizen is not greatly concerned whether Tarvia or some other asphalt product is used on the roads in his locality, provided these roads are economical and durable. They are probably little if any more concerned with such details, than they are with the pump from which they get their gasoline. But in many cases contractors and local officials have become convinced through the advertising and supplementary sales efforts that not only is Tarvia a quality product suited for their needs but also that it has a standing or acceptance in the minds of the consumers, their constituents, which cannot be lightly disregarded, and that all things considered it is good business to follow what will probably prove the line of least resistance and use a product which will undoubtedly meet with popular approval.

American Stainless Steel Company—Stainless Steel

This company has been carrying on a campaign in the *Saturday Evening Post* during 1926 to arouse the public to favor products made from stainless steel. The company has taken pages in the *Post* to talk about the products of its customers in an endeavor to so convince the ultimate consumer of the value of stainless steel that they will favor products made from it.

American Rolling Mills Company—Armco Iron

This company has spent for the 12 years beginning 1914 and ending 1925, \$783,825 in the *Saturday Evening Post*, an average of over \$65,000 a year in space alone. Its product, although bought by the ultimate consumer, practically loses its identity and at the start of the company's efforts was considered a factor of minor importance in the completed articles. However, its consistent advertising has brought very satisfactory results and made the unobtrusive triangular trademark so generally well known that consumers now convinced of the value of Armco Iron show a decided preference for products made from it.

Bunting Brass & Bronze Company—Bunting Bushings

Here is a product that loses its identity for the most part. Yet this concern has adhered to advertising in the *Saturday Evening Post* over a five-year period. During this time it has spent \$192,000 in the *Post*.

E. I. DuPont de Nemours & Company, Ltd.—Duco

While this company has a product which the ultimate consumer actually receives, nevertheless, it was the custom for automobile manufacturers to use the finish they considered best or the kind that they could buy to best advantage on their standard cars. At any rate, the purchaser of the car had little or no choice in the selection of the kind of finish used, and the finish, except for the color, was not an important point in the car owner's mind.

In April, 1924, the DuPont Company first started advertising in the *Saturday Evening Post*, at which time it was able to state that the makers of Oakland cars provided their 1924 models Duco finished. By November, 1924, the company was able to announce 11 manufacturers who had standardized on Duco as a finish for their automobiles, and this list gradually grew until in April, 1926, two years from the start of the campaign, it had a total of 23 manufacturers listed as finishing their cars with Duco.

Duco in its advertising has listed the makes of cars using it, and has reproduced customers' trade-marks and pictures of the cars themselves in its *Saturday Evening Post* copy. As a result, not only has the company found its advertising campaign successful, as judged by the increased space it has used in the *Post*, but also this campaign has apparently met with the approval of customers, the automobile manufacturers.

Size and frequency of space

While it is not necessary that you match your competitors' advertising page for page, you must at least create the impression throughout the trade that you are doing so. Large space advantageously scheduled will give this impression, making a moderate size campaign more impressive than the more elaborate one not so effectively prepared. Judicious use of large space and the striking appeal of the copy often builds up the impression of leadership and dominance in the readers' minds.

If for no other reason, the fact that your leading competitor is using full pages in the *Saturday Evening Post* would make it desirable that you use space equal in size.

As an indication of the increasing appreciation of page space on the part of national advertisers we cite the records of the Curtis Publishing Company, showing that full pages in the *Post* increased from about 22% of the total advertising in 1906 to almost 70% in 1916, and during the 10 years since then it has averaged practically 80% of the total. Of course, there are products small in cost and convenient of purchase which do not justify this use of large space, but in your case page space is the most effective and economical.

We are planning that you use a double-page spread in colors to open your campaign, followed by seven pages in black and white, throughout that portion of the year in which almost three-quarters of your pump sales are made.

It would, of course, be desirable to run pages throughout the year, but we realize that this is not possible with the amount of money you can logically appropriate at this time. Therefore we are recommending that your campaign open with the double spread early in March, followed every fourth issue by a black-and-white page until the middle of September. As we have pointed out, this will permit your advertising to be very effective in that part of the year when buying is most active, when car owners are the most interested in, or cognizant of, gasoline and its dispensing equipment, and when oil company executives and filling station operators are most interested in pumping equipment.

We are submitting on the following page the schedule for this national magazine's advertising, showing the amount of space, the rate, and the total amount involved, which is \$73,725.

To make your budget complete we are including an allowance for the preparation of drawings, engravings, and type composition, and electrotypes for this national consumer advertising. The detailed estimate is given at the end of the plan. Although, naturally, this item cannot be quoted with absolute accuracy at this time, we have estimated it carefully and the figure is approximately correct.

Estimated art and plate allowance for magazine advertising, \$5,201.

In submitting this copy policy we are offering what might be termed the formula by which we have built and plan to build all your consumer advertising.

Briefly, the theme of our copy policy is this: to feature the brand names of as many of your customers as possible, then to say, "These are gasolines you can depend on, dispensed by pumps that measure accurately and filter clean. You can use any of them with perfect confidence. The oil companies who distribute these gasolines have done everything in their power to give you the best possible motor fuel. As evidence of this they have even taken pains to see that you get it clean and in full measure." Which leads into the story of Clark pumps in which the filter which assures clean gasoline and the check-valve which assures full measure, will be especially featured. But for the special purpose of influencing oil company officials and filling station operators who read the advertising, those qualities of the Clark pumps which appeal particularly to them will also be emphasized, such as the ease and speed of operation, the self-return feature, and the added space available for the oil companies' own advertising. Each advertisement will close with an effort to get the motorist to send for a booklet.

Striking illustrations will be used in each advertisement, together with a list of some of the brand names of gasoline distributed by Clark customers. Two illustrations of Clark pumps, a visible and a piston pump, will appear in each advertisement.

The featuring of a number of brands of gasoline on one advertisement should arrest the attention of the car owners, and we feel that it will be bound to attract the attention of all oil company officials and filling station operators as well.

This policy of featuring the brands of gasoline should, furthermore, arouse a very favorable reaction among oil company officials instead of

ESTIMATE ON PROPOSED ADVERTISING OF CLARK PUMP COMPANY
FOR 1927

MAGAZINE SCHEDULE

	Circulation	Form Close	Dates of Insertions	Size of Space	Publishers Gross Rate	Amount
Saturday Evening Post	2,000,000	5 weeks preceding insertion	Mar. 5	double page spread (2 colors)	\$19,000	\$19,000
			April 2	page	8,000	
			April 30	"	"	
			May 28	"	"	
			June 25	"	"	
			July 23	"	"	
			Aug. 20	"	"	
			Sept. 17	"	"	56,000
						\$75,000
						1,275*
						\$73,725

* Cash Discount.

their antagonism because it does not attempt to subordinate the gasoline to the pump. Instead of telling the car owner to buy any gasoline just so long as he gets it from a certain pump, it tells him that here is an added reason why he should buy almost any dependable gasoline. A policy that is economically sound.

Consumer booklet

It is desirable to have a booklet to send in answer to the inquiries which you may receive from your consumer advertising, although you should bear in mind that this advertising is not for the purpose of drawing inquiries. This booklet also can be distributed widely through filling stations. Such a booklet, in addition to providing full information about Clark pumps and the reasons why they should be given favor in the minds of the car owners, will also give the motorist useful and timely information and suggestions pertaining to the various types of gasoline and their function in his car. In addition, this booklet will serve as an additional means of cooperating with your customers, the smaller oil companies, whom it is manifestly impossible for you to feature extensively in your magazine advertising.

This booklet as designed will prove of real interest and an actual help to car owners and it will thus present Clark pumps to them in the most favorable way, and it should win the hearty approval of most if not all of your prospective customers, the oil companies.

The Clark Pump Company decided not to accept the plan of consumer advertising submitted by the agency and instead to continue with its previous advertising plans.

COMMENTARY: This case calls for an appraisal of the lengthy reasoning of the advertising agency in recommending consumer advertising for the gasoline pumps of the Clark Pump Company. The investigation made pointed at first blush to the futility of consumer advertising; yet the agency took the information provided by the investigation and from it undertook to build a case for consumer advertising. The commentator believes that the executives of the Clark Pump Company did well to reject the recommendations of the agency; that consumer advertising in this instance was not an economical business tool or effective selling strategy when cost is considered.

The major points on which the agency's argument was built have been condensed and enumerated so that they may be more easily appraised. The agency apparently reasoned as follows:

1. It is possible through consumer advertising of gasoline pumps to interest consumers to the point where they will discriminate to some extent in favor of filling stations equipped with a certain brand of pump, even though relatively few of the consumers who were interviewed admitted such discrimination. This possibility is attested in part by the results of the advertising of visible pumps carried on by the

Clark Pump Company's competitors. The preference shown by consumers and operators for the visible type of pump, even though a brand consciousness has not been established, probably is a result of consumer advertising.

2. Since a discrimination on the part of the consumer in favor of a certain brand of pump, even though slight, can be built up, oil companies and station operators will be more likely to favor using advertised pumps, since this will provide them with some advantage in securing patronage, which in these times of extreme competition is enough to swing sales to the pump company that advertises.

3. Consumer advertising will be more effective in reaching and influencing executives and minor officials of oil companies as well as filling station operators than would direct-mail or trade paper advertising directed to them specifically because "it is human nature to pay scant attention to many things that are told us, especially those which we think we already know, but to listen in through curiosity on the things which are being told the general public or our customers and which partially concern us."

4. The competing company which has enjoyed the most rapid growth is the one which has been the most consistent advertiser to consumers. Although it is true that his pumps have sold for less, he has had a standardized product, whereas standardization is not a desirable selling policy for gasoline pumps.

5. National advertising will help the company to obtain national distribution since it will make the company known in all localities and will help to overcome possible public prejudices and legislative action against piston pumps, which, apparently, make up a large part of the sales volume of the Clark Pump Company, although it does sell visible pumps.

6. Competitors' advertising was effective in helping them build sales in spite of the fact that the copy approach was basically wrong in that it popularized the pump at the expense of gasoline brands. Accordingly, if a more favorable copy approach is taken, to give the impression that numerous oil companies use the Clark pump because they are good companies and accordingly use the best equipment and that for this they deserve patronage, then even better results may be expected from consumer advertising.

7. National advertising will stimulate the Clark salesmen, give them pride in their company, and provide a powerful sales tool.

8. The consumer advertising will be especially helpful in influencing small oil companies, a desirable market, because "the smaller companies are more inclined to heed the demands of the filling station operator when he specifies a certain type or brand of pumping equipment" than are the larger companies.

Upon investigation we find that the soundness of this line of reasoning rests primarily upon the question of the power of advertising to develop among consumers some degree of discrimination for a brand of gasoline pumps and a preference for filling stations equipped with advertised pumps. In fact, upon the possible development of such discrimination and preference, or at least upon belief on the part of oil companies that discrimination results from advertising, hangs the agency's case. Although in judging this question we can rely in part upon the figures and the opinions obtained in the investigation, we must turn to a more careful study of consumers' buying motives and buying habits in purchasing gasoline than was developed in the questionnaire study. Moreover, some of the data from the study, which was used by the agency to build its case, are open to question.

Assuming that the sample used in the consumer investigation is adequate, we find that there was some knowledge of brands of gasoline pumps among consumers, as might be expected after the considerable advertising that had been carried on over a period of years by companies A, B, and C. Yet all this advertising, which had cost over \$600,000 and had been carried on in the *Saturday Evening Post* over a period of six years, had developed little or no preference for specific brands of pumps on the part of consumers purchasing gasoline. Some preference was shown for the visible type of pump, but the study did not show to what extent this preference for a type of pump actually operated for or against patronage of specific brands of gasoline. The last question asked, which was cited by the agency to bear upon this point; namely, "if you knew that certain oil companies used a nationally known pump whose accuracy was vouched for, while other oil companies used an unidentified pump, would it influence you in your gas purchases, provided, of course, the quality of the gas used by the two companies was the same?" should be disregarded. It is a leading question, the natural answer to which would be "yes."

The agency's investigation and its reasoning take into consideration to too small an extent the various buying motives and buying habits for gasoline. It fails to show to what extent there is a discrimination on the part of consumers for brands of gasolines or what motives lead the consumer to patronize certain brands or certain filling stations. The investigation isolates the factor of the pumps, produces doubtful evidence with regard to the importance of the pump in the consumer's mind, and provides no basis for comparing the importance of this factor with other patronage determining factors. Such buying motives as convenience in purchase and dependability in quality, and patronage motives such as reliability of the seller were not given due consideration. If these buying motives were strong and the patronage motives were well established, then the importance of the pump as a factor in pur-

chase was weak. The fact that consumers generally knew that governmental agencies passed upon the accuracy of pumps was not given fair weight in the agency's argument. The evidence of any great amount of disbelief in the accuracy of pumps was inconclusive and in this connection it was not exactly clear that advertising the accuracy of a pump *per se* would convince the consumer that he would get accurate measurement provided the advertised pump was in the hands of a dishonest filling station operator.

Granting that the copy approach suggested by the agency was superior to that of competitors, still it does not appear that the advertising would be sufficiently effective in overcoming the established buying and patronage motives of consumers for gasoline to justify the expenditure. Accordingly, I do not believe that the agency established its case that consumer advertising would bring even an appreciable discrimination on the part of consumers for filling stations using advertised pumps.

The agency argued that the consumer advertising would be more effective in reaching executives and minor officials of oil companies and station operators than would direct-mail or trade-paper advertising directed to them. It failed here, however, to take into consideration the fact that general consumer advertising would not have permitted the company effectively and adequately to present those characteristics of its pumps which appealed to strong selective buying motives on the part of oil companies and station operators, such as ease of operation, durability, freedom from repair, and dependable repair service. It also overlooked the greatly increased cost of a national consumers' campaign as compared with the direct-mail and trade paper campaign in reaching executives and operators.

The argument advanced concerning the effectiveness of consumer advertising in building competitors' sales is inconclusive. The agency stated that the leading competitor had followed a policy of manufacturing a standardized model and apparently had offered attractive price inducements. Yet, in passing, we may point out that in the plan outlined for the Clark Pump Company simplification of its line was not recommended; in fact, it was thought that standardization was not a desirable sales policy, since different operators desired pumps of different appearance. Although the advertising company apparently had had a large growth of sales, the evidence does not show that this growth of sales resulted from the advertising or that the advertising played an especially important part in it. A price inducement and aggressive personal selling were part of the company's plan.

The argument concerning the use of national advertising to secure uniform distribution of sales also is not well established. In its direct-mail and trade-paper advertising and in its personal selling, the Clark Pump Company had equal opportunity to bring sales promotion and

personal sales effort in whatever territories it desired. Since the company was selling both the piston and the visible type of pumps, it could meet the requirements of pump buyers even in those sections where the visible pump was preferred.

Finally, the agency argued that consumer advertising would be especially effective in influencing purchases by small oil companies. There is grave doubt as to how far it would have been advisable for the Clark Pump Company to direct its selling efforts to the small scattered oil companies and filling station operators. In industrial marketing the seller must determine what prospects he can economically sell. Since a relatively small percentage of companies bought a large percentage of the pumps purchased each year, it was sound marketing practice to direct selling efforts primarily to the large buyers. Beyond this, it is questionable whether the agency even established its point that the small purchasers of pumps were especially subject to influence from consumer advertising. The early part of the agency's report stated that both operators and executives of oil companies showed little belief in the effectiveness of consumer advertising. If the small and scattered prospects were worth cultivating, the company was able to reach them through the channels of the trade press and direct mail, and in any event personal selling efforts would have been required to consummate sales.

In summary then, since consumer advertising apparently would have had little effect in leading the consumer to discriminate in favor of gasoline brands or filling stations using advertised pumps, and since advertising in a general consumer's medium was not an economical and effective way of presenting buying motives for pumps to station operators and oil company executives, it would have been better for the Clark Pump Company to follow its promotional work in the trade press and with direct mail.

This case is similar in many aspects to cases involving advertising of fabricated materials or parts to consumers. One of the broad conclusions reached in such cases is that a fabricated material or part which does not enter as an important part of the ultimate product in which it is incorporated probably cannot be advertised economically to the consumer. Gasoline pumps are not to be classified as fabricated parts but as essential accessory equipment in dispensing gasoline; but the proposed advertising was to be directed at the consumer with much the same strategy as is employed in advertising fabricated parts to consumers. My conclusion is that the pump could not be made to appear of enough consequence to the consumer to alter his established buying and patronage motives in the purchase of gasoline. Hence, the advertising would not have been especially effective in influencing the oil companies in their purchases of pumps.

April, 1928

N. H. B.

WHITMER MAIL ORDER COMPANY¹

ADVERTISING—*Discontinuance of Magazine Advertising.* A large mail-order company, which sold its merchandise by means of two catalogs, sent to customers every spring and fall, from 1888 through 1914 had advertised regularly in women's magazines with national circulation, and from 1915 to 1924 had made intermittent use of the same medium. The immediate purpose of this advertising was to encourage requests for catalogs. In 1924, the advertising manager, believing that the results secured from this type of advertising were not commensurate with the expense and that sales would increase satisfactorily without it, decided not to purchase any magazine space for the spring of 1925.

(1924)

The Whitmer Mail Order Company sold, directly by mail, men's, women's, and children's clothing, as well as curtains, blankets, and linens. In November, 1924, the company contemplated the discontinuance of its magazine advertising. The president of the company was of the opinion that the results secured from this type of advertising were not commensurate with the expense, and that sales would increase satisfactorily with no magazine advertising.

In 1924 the company had 3,000,000 customers, to all of whom it sold only on a cash basis. The number of orders received had increased from 4,000,000 in 1915 to 9,100,000 in 1923, as shown by Exhibit 1.

EXHIBIT 1

NUMBER OF ORDERS RECEIVED BY THE WHITMER MAIL ORDER COMPANY, BY YEARS, FROM 1915 THROUGH 1923

Year	Number of Orders
1915.....	4,000,000
1916.....	4,500,000
1917.....	5,026,000
1918.....	5,741,000
1919.....	5,661,000
1920.....	6,038,000
1921.....	5,512,000
1922.....	7,620,000
1923.....	9,100,000

¹ Fictitious name.

In 1923 the company's net sales had amounted to \$52,340,000. Sales and profits from 1914 to 1923, inclusive, are given in Exhibit 2.

EXHIBIT 2

NET SALES AND NET PROFITS OF THE WHITMER MAIL ORDER COMPANY
BEFORE DEDUCTION OF FEDERAL TAXES, BY YEARS, FROM 1914
THROUGH 1923

Year	Net Sales	Net Profit before Deduction of Federal Taxes
1914.....	\$15,165,000	\$1,013,000
1915.....	17,372,000	1,015,000
1916.....	21,554,000	2,082,000
1917.....	27,650,000	2,571,000
1918.....	33,485,000	1,669,000
1919.....	39,450,000	2,327,000
1920.....	47,704,000	1,130,000*
1921.....	37,481,000	2,440,000*
1922.....	45,358,000	2,047,000
1923.....	52,340,000	2,765,000

* Loss.

In the spring and again in the autumn of each year, the company sent catalogs describing its merchandise to approximately 4,000,000 persons; the cost per copy delivered was about 50 cents. In addition to these two large catalogs, the company sent out flyers announcing a sale of white goods in January, and others announcing a midsummer sale in June. The immediate purpose of any magazine advertising which the company had done was to encourage requests for catalogs. From 1888 through 1914, the company had advertised regularly in February, March, April, September, October, and November in women's magazines with national circulations; it had used full-page advertisements in the *Ladies' Home Journal* each season since 1905. From 1915 through 1924 the company had followed no definite policy in regard to magazine advertising. In some years the company had not purchased any space in magazines; in others, it had spent amounts varying from \$6,000 to \$225,000 for advertising in women's publications. In 1915 the company had had difficulty in obtaining paper upon which to print its catalogs, and consequently had not wished to encourage requests for them by advertising. From 1916 through 1919 the company did no magazine advertising. During that period, the company's prices were changing rapidly, and,

since the catalogs contained complete price lists, the company did not wish to distribute large numbers of them.

Exhibit 3 summarizes the company's magazine advertising for the years from 1914 through 1924. The company did no other advertising, except through the distribution of its catalogs.

EXHIBIT 3

SUMMARY OF THE WHITMER MAIL ORDER COMPANY'S EXPENDITURES
FOR MAGAZINE ADVERTISING AND THE TYPE OF MEDIUMS AND
SIZES OF INSERTIONS USED FROM 1914 THROUGH 1924

Year	Amount Spent	Mediums	Size of Insertions
1914	\$225,000	25 women's magazines	Full page
1915	6,000	2 women's magazines	Full page
None until			
1920 Spring	7,500	1 women's magazine	Full page
1920 Fall	70,000	Data not available	
1921 Spring	151,000	Data not available	
1921 Fall	100,000	Data not available	
None until			
1923	90,000	5 women's magazines	Full page
1924 Spring	85,000	9 women's magazines	Full page
1924 Fall	85,000	9 women's magazines	Full page

The Whitmer Mail Order Company competed with about 25 mail-order companies, nearly all of which advertised in general magazines. The company's largest competitor had spent an amount equal to about $\frac{1}{4}$ of 1% of its net sales for advertising in general magazines since 1922; and the second largest competitor since the summer of 1921 had spent an amount equal to approximately 1% of its net sales for this type of advertising. The first company's gross sales in 1923 were \$191,000,000, and the second competitor's net sales in that year were \$123,700,000. Both these firms, like the Whitmer Mail Order Company, sold several lines of merchandise. Exhibit 4 shows their sales for the years 1918 to 1923, inclusive.

Another mail-order firm that sold only wearing apparel spent, in 1923, approximately $2\frac{1}{2}\%$ of net sales, which amounted to \$21,000,000, for magazine advertising. Yet another mail-order company which sold only wearing apparel spent for magazine advertising in that year an amount equal to $1\frac{1}{2}\%$ of net sales, which were \$18,000,000.

The advertising manager of the Whitmer Mail Order Company stated that the total initial purchases of customers secured through

EXHIBIT 4

GROSS SALES OF LARGEST COMPETITOR OF THE WHITMER MAIL ORDER COMPANY AND NET SALES OF SECOND LARGEST COMPETITOR, BY YEARS, FROM 1918 THROUGH 1923

Year	Largest Competitor Gross Sales	Second Largest Competitor Net Sales
1918.....	\$181,667,000	\$ 76,167,000
1919.....	233,983,000	99,336,000
1920.....	233,857,000	101,745,000
1921.....	150,035,000	68,523,000
1922.....	160,648,000	84,739,000
1923.....	191,324,000	123,702,000

magazine advertising amounted to little more than the expense of the advertising. He cited as an example the experience which the company had had with an advertisement that had appeared in one of the largest magazines for women. The advertisement cost \$12,000, and resulted in 38,000 requests for catalogs. Since the expense of each catalog was about 50 cents, the total expense to the company of sending catalogs to the new mailing list was \$19,000. The company secured 5,400 orders from those who had received catalogs. Since the retail value of the company's average order was \$6, the executives assumed that the total sales made from the distribution of these catalogs amounted to approximately \$32,400. The advertising manager recognized that many of these new customers would purchase again and that this advertising probably had stimulated many of the company's other customers to place orders.

The company, nevertheless, decided not to purchase any advertising space in magazines for the spring of 1925.

COMMENTARY: The Whitmer Mail Order Company had been in operation long enough and had developed a business large enough to establish patronage motives with a large clientele. In maintaining and in expanding the volume of its sales, the company's task was primarily one of finding means of keeping old customers, who had already had catalogs, ordering regularly. In other words, the company probably had a larger opportunity for profit through devising schemes of making resales than in placing its catalog in new hands; yet the placing of its catalog in the hands of good prospects was an essential part of its promotional program.

Whether magazine advertising could be used to good advantage by the company, either in inducing new prospects to write for the catalog or in stimulating old customers to order, cannot be decided conclusively from the facts presented in this case. The evidence indicates that through special offers in magazines requests for catalogs could be induced at a not excessive price. An extended check of sales to these catalog requesters would be advisable as real evidence of the value of the inquiries. The case does not indicate, moreover, what other means the company had of getting its catalogs into the hands of new and interested prospects and the extent to which these means might be more economical and effective than space advertising.

As suggested in the case, space advertising can play a part in the marketing policy of a mail-order business. Well devised copy can increase the familiarity of the public with a company's name and help to establish patronage motives. Through featuring special offers, such advertising can build up business on particular items or lines. Through the merchandise featured, it may act as a stimulant in leading present catalog holders to reorder. Fortunately, in the case of the mail-order firm, it is feasible to set up a record system which will give data not only on the cost of securing catalog requests through various means, but also on the sales resulting from such requests. Thus, a basis for determining the relative effectiveness of different methods of distributing the company's catalogs is secured. It is interesting to note that the Whitmer Mail Order Company apparently had found space advertising in magazines as a means of soliciting requests for catalogs and stimulating reorders more valuable in its early years than subsequently, when it had an established clientele and a large volume of business.

March, 1929

N. H. B.

SLOANE & TODD¹

INVESTMENT BANKERS

ADVERTISING—*Selecting Form of Financial Advertising.* An investment firm, which never had advertised, because of the growth in volume and diversification of its business considered doing so in 1927. In order to determine the most effective form of financial advertising, the firm made a study of such advertising in newspapers, in the *Commercial and Financial Chronicle*, and in the magazines known as the quality group.

(1927)

In 1927, Sloane & Todd, a Boston investment house, was considering what policy it should pursue in regard to advertising in the local newspapers. The firm never had advertised in the past, but the growth in the volume and diversification of its business had led it to consider doing so at that time.

After its formation in 1916 the firm did a business which was largely brokerage until 1925, when it began to participate as a dealer in various selling syndicates and to originate a few small issues. The firm's customers were all located in Boston or the neighboring suburbs. The house employed four salesmen, and the two partners also did a substantial amount of selling. The house was a member of the New York and Boston stock exchanges; it had a man on the floor of the Boston Stock Exchange but handled its New York Stock Exchange transactions through a correspondent in that city.

In order to determine the most effective form of financial advertising, the partners of Sloane & Todd made a study of such advertising in the Boston newspapers, the *Commercial and Financial Chronicle*, and the magazines known generally as the quality group. The partners studied advertisements not only of investment houses but also of investment trusts, investment counsels, and other financial institutions which advertised extensively. The advertisements shown in Exhibits 1 to 6 were selected as being typical of the various forms of advertising used by these institu-

¹ Fictitious name.

Bonbright & Company

Incorporated

Investment Securities

NEW YORK**BOSTON
DETROIT****PHILADELPHIA
ST. LOUIS****CHICAGO****BANGOR
MILWAUKEE
SAN FRANCISCO
SCRANTON****DAVENPORT
PITTSBURGH
SPRINGFIELD
BALTIMORE****ELMIRA
PORTLAND
WASHINGTON
ALBANY****PROVIDENCE
ROCHESTER
WORCESTER
NEW HAVEN**

ADDITIONAL ISSUE**\$3,000,000****Edward G. Budd Manufacturing Company****7% Cumulative Preferred Stock**
Series of 1925*Authorized \$30,000,000; outstanding (including this issue) \$3,372,000. Callable as a whole, or in part for Sinking Fund, upon 30 days' notice at 110 and accrued dividends.**Exempt from present Pennsylvania 4 Mills Personal Property Tax
Dividends exempt from present Normal Federal Income Tax***CAPITALIZATION AND SURPLUS***(upon completion of present financing and issuance of 49,112 additional shares of Common Stock)***Funded Debt:**

First Mortgage Serial 6% Gold Bonds, due August 1, 1927-1932 (closed),	\$895,000	
6% Sinking Fund Convertible Gold Bonds, due February 1, 1938,	2,889,000	\$3,884,000

Capital Stock and Surplus:

Preferred Stock, 7% Cumulative Series of 1925,	\$3,840,200	
Series of 1925 (including this issue),	5,471,800	\$8,312,000

Common Stock, 345,560 shares, no par value, net assets available for Common Stock (excluding patents and deferred assets),	\$2,998,637
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The Company also has outstanding two real estate mortgages, \$375,000 at 5% and \$300,000 at 6%, both due in 1927.

Preferred Stock of the Series of 1923 and Preferred Stock of the Series of 1925 are identical in rights, privileges and terms, except that Sinking Fund payments are applied to each Series in the proportion which its total issued amount bears to the combined total issued amount of all Series.

*From his letter to us, Edward G. Budd, Esq., President, further summarizes as follows:***BUSINESS:** Edward G. Budd Manufacturing Company, incorporated in Pennsylvania in 1912, largest manufacturer of all-steel automobile bodies in world, has capacity of 1,000,000 bodies a year. Company is also engaged in manufacture and sale of diversified steel products in automobile industry. Plants, owned and leased, at Philadelphia and Detroit. Customers include large proportion of leading automobile manufacturers in United States. Growth in business has been rapid and substantial. Sales have increased from \$5,125,936 in 1916 to \$24,743,359 in 1925, and for first 9 months of 1926 were at annual rate of over \$43,000,000. Present orders at annual rate of over \$80,000,000.**ASSETS:** Net assets (exclusive of patents and deferred assets), after deducting all liabilities other than capital stock, amount to \$17,310,637, equal to more than \$208 per share of total Preferred Stock now to be outstanding. Total current assets, as of August 31, 1926, but giving effect to the present financing, amount to \$12,627,425, or more than 3 times total current liabilities of \$4,066,513.**EARNINGS:** Average annual net earnings available for dividends for 10 years ended December 31, 1925, were \$1,256,813 or more than twice the \$581,840 dividend requirement on Preferred Stock now to be outstanding, and for last 4 years were \$1,761,088 or more than 3 times this requirement. Net earnings for year ended December 31, 1925, were \$2,493,674 or more than 4½ times, and for the 8 months ended August 31, 1926, were \$1,757,165 or at the rate of more than 4½ times this requirement.

Company jointly and severally with Budd Wheel Company has recently leased from Budd Realty Corporation additional space more than doubling floor area available for this Company. Total annual rental \$1,050,300, of which this Company is primarily liable for 63%, or \$661,500, and of this last amount \$205,128 is to be used for cumulative sinking funds on bonds of Budd Realty Corporation, the stock of which the Company has option to purchase during life of lease. This rental (of which only a part was payable and so deducted in period covered by above earnings) constitutes a charge prior to Preferred dividends.

*Provisions governing the further issue of the Preferred Stock, defining its preferences, the limitations of its voting power, etc., are described in a circular copy of which may be obtained upon request.**Application will be made to list this Preferred Stock on the New York Stock Exchange.***We Recommend this Preferred Stock for Investment****Price 97 and accrued dividend, to yield about 7.22%***Preferred Stock offered when, as and if issued and received by us and subject to approval of counsel.***Lee, Higginson & Co. Brown Brothers & Co.**

Boston

*The above statements, while not guaranteed, are based upon information and advice which we believe accurate and reliable.***Exhibit 2: The Boston Herald, October 8, 1926.**

T E R R I T O R Y



Diversity!

A Prime Requisite of Safety

SECURITY of invested capital requires intelligent diversification of investments. Such a distribution may be secured without going beyond the Power and Light Industry. The business of every Power and Light Company is in reality a cross section of the prosperity in each territory served.

Such a group of units serving widely separated productive areas, with electric current, produced by varying methods, and from independent sources of power, offer one of the best examples of genuine diversification.

To the Investor this means a well-balanced combination of safety and income return.

The companies listed above, are power and light units whose territories and methods of power generation vary widely. We are thoroughly acquainted in each case with the organization and management of these companies and can recommend their securities for investment.

A booklet discussing the factors underlying such securities, together with full information on any of the companies above will be sent on request

Write for Booklet JF-3

BOND DEPARTMENT

**OLD
COLONY**



**TRUST
COMPANY**

**BOSTON, MASS.
17 COURT STREET**

Exhibit 3: *The Boston Traveler*, May 31, 1927.



20 Public Utility Bonds

Approaching or selling near their call prices

Combining Yields of 5.35% to 6.00%
with Short-term Possibilities

MANY investors would like more short-term bonds in their holdings, but find it difficult to obtain them in the current market at a satisfactory rate of yield. An interesting alternative is offered in callable long-term bonds approaching or selling near their call prices.

If future interest rates favor the calling of these bonds, they will serve, meanwhile, the purpose of short-term investments with attractive yield; and, in cases where the present price

is below the call price, afford possibility of some appreciation in principal.

On the other hand, if the bonds are not called, they will yield the holder a rate of income, to maturity, which is above the present normal rate for comparable securities.

The list below, made up of public utility issues of our own origination, affords a wide range of selection. More detailed information regarding any of the offerings will be given upon request.

BOND	COUPON RATE	MATURITY	CALL PROVISIONS	CALL PRICE	PRESENT PRICE	YIELD TO MATURITY ABOUT	INTEREST YIELD ABOUT (Approximate Annual)
EASTERN WISCONSIN ELECTRIC COMPANY First Lien and Refunding Mortgage, Series B	6½%	9-1-1948	Non-callable to 9-1-33 Thereafter to 9-1-38	107½	108	\$5.84%	6.00%
KENTUCKY UTILITIES COMPANY First Mortgage Lien, (Now First) Series D	6½%	9-1-1948	Non-callable to 9-1-33 Thereafter to 9-1-38	107½	108	\$5.80%	6.00%
MIDDLE WEST POWER COMPANY First Mortgage, Series A	6½%	5-1-1943	Non-callable to 5-1-28 Thereafter to 5-1-33	107½	108½	\$5.70%	6.00%
CHICAGO, NORTH SHORE AND MILWAUKEE RAILROAD COMPANY First and Refunding Mortgage, Series A	6%	2-1-1955	To 1-1-35 Thereafter to 1-1-40	105 106	101½	\$5.5%	5.90%
MIDDLE STATES WATER WORKS COMPANY First Mortgage Collateral	6%	11-1-1936	To 11-1-32 Thereafter to 11-1-38	103 104	103	\$5.59%	5.81%
SHORE CITY SERVICE COMPANY First Mortgage, Series due 1931	6%	1-8-1951	To 1-1-36 Thereafter to 1-1-41	103 103	103	\$5.78%	5.81%
CENTRAL POWER COMPANY (Nebr.) First Mortgage, Series C	6%	6-1-1944	To 6-1-39 Thereafter to 6-1-34	105 104	105	\$5.55%	5.70%
CENTRAL ILLINOIS PUBLIC SERVICE COMPANY First Mortgage and Refunding, Series C	6%	1-1-1944	To 1-1-39 Thereafter to 1-1-39	107½ 105	105	\$5.63%	5.70%
CENTRAL INDIANA POWER COMPANY First Mortgage Collateral and Refunding, Series A	6%	7-1-1947	Non-callable to 7-1-33 Thereafter to 7-1-37	107½	105	\$5.58%	5.70%
KENTUCKY HYDRO ELECTRIC COMPANY First Mortgage, Series A	6%	6-1-1949	To 6-1-39 Thereafter to 6-1-34	105 106	105	\$5.60%	5.70%
INDIANA ELECTRIC CORPORATION First Mortgage, Series A	6%	11-1-1947	Non-callable to 11-1-33 Thereafter to 11-1-37	107½	105	\$5.58%	5.70%
THE KANSAS POWER AND LIGHT COMPANY First Mortgage, Series A	6%	5-1-1955	To 11-1-45	105	105	\$5.64%	5.70%
WEST OHIO GAS COMPANY First and Refunding Mortgage, Series A	6%	12-1-1954	To 12-1-43	107 (Based on each year)	105	\$5.64%	5.70%
KENTUCKY UTILITIES COMPANY First Mortgage Lien, (Now First) Series C	6%	5-1-1953	To 5-1-33 Thereafter to 5-1-37	105 104	105	\$5.63%	5.70%
WISCONSIN POWER & LIGHT COMPANY First Lien and Refunding Mortgage, Series C	6%	5-1-1944	To 5-1-39 Thereafter to 5-1-34	105 104	105	\$5.55%	5.70%
PORTLAND ELECTRIC POWER COMPANY First Lien and Refunding Mortgage, Series B	6%	5-1-1947	To 5-1-42 Thereafter prior to maturity	105 101½	{ 100½ } { 101½ } { 101½ }	\$5.93%	5.70%
ILLINOIS POWER AND LIGHT CORPORATION First and Refunding Mortgage, Series B	5½%	12-1-1954	To 6-1-45	105	104	\$5.36%	5.40%
CENTRAL ILLINOIS PUBLIC SERVICE COMPANY First Mortgage and Refunding, Series D	5½%	6-1-1950	To 6-1-35 Thereafter to 6-1-41	105 103	101½	\$5.36%	5.40%
INTERSTATE PUBLIC SERVICE COMPANY First Mortgage and Refunding, Series C	5½%	10-1-1950	To 10-1-35 Thereafter to 10-1-45	105 101½	108	\$5.35%	5.40%
WISCONSIN PUBLIC SERVICE CORPORATION First Lien and Refunding Mortgage, Series B	5½%	1-1-1958	To 1-1-33 Thereafter to 1-1-43	105½ 105	101½	\$5.33%	5.35%

ALL OFFERINGS ARE MADE SUBJECT TO PRIOR SALES AND CHANGES IN PRICE

HALSEY, STUART & CO.

(INCORPORATED)

85 Devonshire Street

CHICAGO NEW YORK PHILADELPHIA DETROIT CLEVELAND
ST. LOUIS BOSTON MILWAUKEE MINNEAPOLIS

Exhibit 4: The Boston Herald, December 17, 1925.

Announcing:

The Investment Company of America

AN INVESTMENT TRUST

AUTHORIZED CAPITALIZATION
Preferred Shares (\$100. par) \$5,000,000
Common Shares (no par value) 200,000 Shares

THE INVESTMENT COMPANY OF AMERICA has been formed as a Business Trust, administered by Trustees who are incorporated as a Trustee Corporation under Michigan law, to conduct the business of an Investment Trust. Its purpose is to obtain for the investor a higher return on capital employed than is ordinarily available with safety to him as an individual. It is engaged solely in the business of investing and reinvesting its resources in seasoned, marketable securities and affords its shareholders safety of principal through careful examination, broad diversification and constant supervision. The organization consists of four main divisions of function: A Board of Trustees, a Research Department, an Economic Council and an Advisory Board. These units work in close co-operation toward the conservative and effective investment of the Trust fund.

THE ADVISORY BOARD is vested with the final power of veto or approval of securities recommended by the Trustees for investment of the Trust fund. Its membership includes men who have achieved success in many fields and are the heads of industrial and financial institutions of wide scope and contacts:

STANDISH BACKUS, Detroit.
President, Burroughs-Adding Machine Company;
Director: Security Trust Company, Detroit Edison Company,
Standard Accident Insurance Company.
LEO M. BUTZEL, Detroit.
Sorenson, Butzel, Eason and Long, Attorneys.
Director: First National Bank in Detroit, Security Trust Company,
Standard Accident Insurance Company, Detroit Steel Products Co.
ROY D. CHAPIN, Detroit.
Chairman of the Board, Hudson Motor Car Company.
Director: First National Bank in Detroit, Guardian Trust Company of Detroit.
STANFORD T. CRAPO, Detroit.
Secretary-Treasurer, Huron Portland Cement Company.
Director: First National Company of Detroit, Fore Marquette Railway Company.
EDWARD E. MACCRONE, Detroit.
E. E. MacCrone & Company.
Director: Eureka Vacuum Cleaner Company, Michigan Copper and Brass Company.

JAMES S. HOLDEN, Detroit.
President, James S. Holden Company;
Chairman of the Board, Security Trust Company; Director: Wayne Coney and Home Savings Bank, Detroit Edison Company;
Trustee, The Northwestern Mutual Life Insurance Company.
CHARLES S. MOTT, Flint.
Vice-President, General Motors Corporation;
Director: National Bank of Commerce, Detroit Trust Company;
President, Industrial Savings Bank of Flint.
E. A. PIERCE, New York City.
E. A. Pierce & Company,
Members of the New York Stock Exchange.
B. D. STAIR, Detroit.
President, The Detroit Free Press;
Director: First National Bank in Detroit, Detroit Trust Company,
Piquette-Detroit Motor Car Co., Detroit Creamery Co.
THOMAS H. WHITE, Cleveland.
Vice-President and General Manager,
The White Motor Company.

THE ECONOMIC COUNCIL advises the Trustees as to the formation of the investment policy and in the selection of types of securities and lines of industry favored by economic trends. It is composed of a group of distinguished economists, including:

JOSEPH S. DAVIS,
Professor of Economics, Stanford University, and Director of the Food Research Institute.
EDMUND E. DAY,
Professor of Economics and Dean of the School of Business Administration, University of Michigan.
IRVING FISHER,
Professor of Economics, Yale University and Chairman of the Board, The Kordex Institute.
DAVID FRIDAY,
Economist and Director, National Bureau of Economic Research by Appointment of American Economic Association.

THE RESEARCH DEPARTMENT is continuously engaged in analyzing economic conditions, financial trends, and in study of leading industries and lines of trade and of individual companies engaged therein. This fully personelled organization has as department heads:

ALBERT J. HETTINGER, JR.,
Director of Research, Formerly Professor of Business Statistics, Harvard University Graduate School of Business Administration, and Economist to the Federal Reserve Bank of Boston.
CLYDE R. CHAMBERS,
Assistant Director of Research in charge of Industrial Statistics, Formerly Economic Analyst and Chief of the Section of Statistics, U. S. Treasury Department.
ALEXANDER STANDISH,
Public Utility Analyst, Formerly statistician, Division of Economic and Financial Statistics, American Telephone and Telegraph Co.
CHARLES S. COREY,
Railroad Analyst, Formerly statistician, Industrial Statistics Division, Federal Reserve Bank of Boston.
RAGNAR NAESS,
Industrial Company Analyst, Formerly statistician, Division of Statistics, Federal Reserve Bank of New York.

THE TRUSTEES are charged with the responsibility of investing the Trust fund subject to terms of the Trust Indenture and approval of the Advisory Board. Their recommendations to the Advisory Board are based upon the studies of the Research Department and advice of the Economic Council, supplemented by field investigations. The Trustees are Edward E. MacCrone, Charles J. Collins and Jonathan B. Lovelace of E. E. MacCrone & Company, Raymond K. Dykema of Dykema, Jones and Wheat, and Albert J. Hettinger, Jr., President of the Investment Research Corporation.

The investing public will be enabled to participate in the benefits of the Trust through the purchase of preferred and common shares, of which it is expected a public offering will be made in the near future.

Detroit, April 19, 1927.

E. E. MACCRONE & COMPANY

Exhibit 5: The Boston Transcript, April 20, 1927.

Join today—be a partner in 25 outstanding business successes

Here is a single investment—shares of *Incorporated Investors*—that gives you ownership in twenty-five of the most prosperous established business enterprises in America.

Can you think of a better place for your money—regardless of amount? A place where funds will have security so great—yield so reasonable—capital increase so constant.

Expert research has demonstrated that over a period of years a properly diversified list of sound common stocks is equal to bonds in safety—and superior in income and growth of capital.

However, only the expert statistician can select the best stocks—only the wealthy have sufficient money for proper diversification.

Shares of *Incorporated Investors* meet all the requirements of the small—as well as the large—investor. It provides the proper amount of diversification in the best companies in each industry.

Incorporated Investors does not attempt to snatch a quick stock market profit—but ownership of its shares **MAKES YOU A PARTNER** with America's leaders—and builds your fortune with theirs.

INCORPORATED INVESTORS

An Investment Trust Managed by
Parker, Putnam & Nightingale, Inc.,
60 State Street, Boston, Mass.

Incorporated Investors gives you ownership in Dupont, Atchison, American Telephone, United Fruit, Electric Bond and Share—a total of 25 leading companies—22 of which on 29 occasions during the past year gave increases in income.

MAIL THIS TODAY
Parker, Putnam & Nightingale, Inc.
60 State Street, Boston, Mass.
Please send me illustrated booklet about
INCORPORATED INVESTORS—and full
information about the shares.

tions, although the partners realized that the rules of the New York Stock Exchange would prevent their using some of these types.

COMMENTARY: It is evident, of course, that the financial institutions whose advertisements appear in this case are of widely different types and that these samples of advertising are not expected to be used in parallel situations. The difference in the effect of these advertisements on the average reader, however, is marked.

The rules of the stock exchange often are blamed for the failure of financial houses to use effective advertising, but there is serious question whether the blame should be placed on this organization alone. Many financial houses not members of the exchange and therefore not governed by its rules still follow a style of advertising which has long ago been discarded in other fields. Although Sloane & Todd had to be governed by the rules of the Boston and New York Stock Exchanges, folders, letters, and newspaper and magazine advertisements of other members of these exchanges indicated that in spite of these rules more effective methods could have been used than the obsolete and uninteresting style of advertising followed by so many financial houses.

In almost every field but that of finance, large sums of money have been spent in studying the appeals most effective in persuading individuals to buy the merchandise advertised. Attempts also have been made to arouse in the reader a realization of new wants.

With the increased prosperity throughout the United States in the period following the World War, there has been a great increase in the number and types of individuals who are customers for financial institutions. To take full advantage of this new field, a few trust companies and similar organizations have begun to use the force of advertising. Many of the investment houses, however, have taken the attitude that they must follow the obsolete methods of a quarter of a century ago in order to appear conservative; they frequently excuse their lack of interest by the statement that advertising plays only a small part in the sale of their securities. An examination of the advertisements of houses following this policy indicates that in all probability this statement not only is true but will undoubtedly continue to be true so long as these organizations continue to follow archaic methods and refuse to profit by the advancement made in advertising in other fields.

Whether or not the average financial house approves the type of advertising shown in Exhibit 6, the fact remains that this appeal has been extremely successful. Other institutions have used this emotional as well as educational appeal in a modified degree. Sloane & Todd,

therefore, should have adopted the educational type of advertising as far as possible. In those cases where the publication required three insertions a week for the advertiser to obtain the lowest rates, the house might have adopted the policy of using one large insert of the educational type each week followed by two of the small corner-card style of insert, whose purpose would be primarily that of "rate makers."

August, 1929

C. E. F.

SCANLAN COMPANY¹

DEPARTMENT STORE

SALES PROMOTION—*Daily Departmental Sales Events in Store Holding Frequent Store-wide Sales.* A department store for a number of years had held the following store-wide sales, primarily to increase the total sales volume: a one-week Anniversary Sale; a Remnant Sale, held twice a year for a period of two weeks; an Economy Sale, held twice a month for one day; and a Dollar-Day Sale, held on one day each month. In the early part of 1924, because sales were less than for the same period of the preceding year, the company considered inaugurating daily departmental sales events in addition to the store-wide sales. Under this plan, one department would be featured on each day.

(1924)

In the early part of 1924, because sales in the department store of the Scanlan Company were less than for the same period of the preceding year, the merchandise executives of the company considered the advisability of inaugurating daily departmental sales events.

In the 80 departments of the Scanlan Company's store, merchandise to the value of \$7,734,000 was sold in 1923. Ninety per cent of the sales made by the store were for cash, since a policy of granting credit to customers had been in effect for only two years. The total annual expenses of the store had averaged 31.5% of net sales both in 1922 and in 1923. During the same period the stock-turn had approximated five times a year. In 1922, the net profit had been 3% of net sales, and in 1923, 3.25%. The total salesforce expense in 1923 had been 6.8% of net sales, while the total buying salaries, including the receiving and marking pay roll, had been 1.6%.

For a number of years it had been the company's custom to hold store-wide sales, primarily to increase the total sales volume. For the Anniversary Sale, held for a week every November, approximately 200 extra salespeople were hired and an additional 20% of advertising was done. Each department of the store

¹ Fictitious name.

was required to feature at least one item of merchandise for that sale. All the merchandise purchased specially for the Anniversary Sale was regular merchandise of standard quality. The mark-up on the items featured was not to exceed 25% of the usual selling price, as compared with a normal mark-up of 35%. Each department was expected to secure an average mark-up of 35% on actual selling price. The total sales secured during the week of the Anniversary Sale usually were 15% greater in volume than those for the same period of the previous month. Merchandise left over was marked up and placed in the regular stocks.

A Remnant Sale, also store-wide in scope, was held during the first two weeks of August and the first two weeks of February, in order to increase sales during these ordinarily dull months. The merchandise featured by the departments for the Remnant Sale consisted mainly of second-quality merchandise purchased specially for this sale at the most favorable prices obtainable. The mark-up on the items featured in the Remnant Sale averaged about 28% of the selling price. The same number of extra salespeople were required and the same amount of extra advertising was done for the Remnant Sale as for the Anniversary Sale. A sales increase of 25% over the preceding month usually was obtained as a result of the Remnant Sale. For the purpose of disposing of special merchandise remaining after this sale, a 10% reduction in the retail prices sometimes was made; these goods never were given an additional mark-up and placed with the regular stock of merchandise.

A store-wide sale known as the Economy Sale was held on the second and fourth Wednesday of each month. Merchandise featured for this sale was of the same quality as that usually sold in the store. No extra salespeople were hired and there was no extra advertising, although all the regular daily advertising was devoted to the announcement of this sale. The mark-up on the items featured by the departments for the Economy Sale was the same as that obtained on the merchandise featured during the Anniversary Sale, 25% of the usual selling price. A sales increase of 8% over the preceding Wednesday usually was obtained on the day of the Economy Sale.

The Dollar Day Sale, held on the third Thursday of each month, was also a store-wide event. For this sale no extra salespeople were employed, but the advertising expenditure was

increased by $33\frac{1}{3}\%$. The merchandise featured for this sale was of regular quality and bore a mark-up of 20% of the usual retail price. No mail or telephone orders were accepted, and a limit was placed on the amount of merchandise that a customer could purchase in each department. For instance, if blankets were featured by the house furnishings department, each customer could purchase only two of them. A sales increase of 15% over the preceding Thursday usually was obtained from the Dollar Day Sale.

It frequently was difficult for a buyer to feature a different item of merchandise for each of the store-wide sales that was held, and at the same time maintain the required average mark-up of 35% for his department. Before a sale, it was the practice of each buyer to attempt to secure from a manufacturer a quantity of regular merchandise at less than the usual wholesale price. If the buyer was successful in securing an unusually large concession from the manufacturer, he featured this merchandise and still secured the required mark-up of 35%. If, for example, the buyer of the yard goods department induced a manufacturer of mes-saline silk to sell at $87\frac{1}{2}$ cents a yard material which he regularly purchased at \$1.05 a yard, he featured that merchandise at \$1.34 a yard instead of at \$1.61 a yard. A buyer who was unable to secure a reduction, however, was forced to purchase merchandise at the usual wholesale price and sell it at a smaller mark-up. Each buyer of the Scanlan Company was paid a bonus of 1% on sales in excess of his quota, provided the mark-up for his department averaged 35%. The quota for each buyer was established semiannually by the merchandise office.

Under the proposed plan of daily departmental sales events, each buyer, in addition to providing a special item of merchandise for each of the store-wide sales, was to provide special items for the days on which his particular department was featured. A mark-up of $33\frac{1}{3}\%$ of the regular retail price was to be allowed on the merchandise featured for these departmental sales, and this merchandise was to be of the same quality as that in the regular stocks. A schedule covering all the departments of the store was to be drawn up each month, and a date assigned to each department. On Monday of one week, for instance, millinery would be featured; on Tuesday, dry goods; on Wednesday, luggage; on Thursday, rugs; on Friday, silks and wash goods; and on Saturday, groceries. A buyer thus normally would have

a month in which to obtain special merchandise for the next sales event in his department. The regular advertising of the store was to be concentrated on the various departments featured for each day; but the appropriation for advertising was not to be increased.

COMMENTARY: This case raises the question of the desirability of an organized program of special departmental sales events as a selling policy, either in addition to or in place of a considerable number of general store-wide sales events.²

The difference between these two types of special sales events is sufficiently indicated by the terms commonly used in describing them. In certain respects special departmental sales events are more advantageous than general store-wide sales events. There is less confusion and consequently more freedom from errors, mistakes, and other causes of customer dissatisfaction. There is also less additional expense; ordinarily it is not necessary to hire extra salespeople for a special departmental sales event. Furthermore, the times of special departmental sales events may be adjusted to the seasonal requirements of the particular departments. Finally, in advertising a special departmental sales event, it is possible to emphasize selling appeals other than that of low price; whereas for a general store-wide sale most of the promotional emphasis necessarily must be given to the price appeal, because the great variety of merchandise offered precludes much more than the mere mention of the goods and their prices. On the other hand, store-wide sales permit much greater advertising displays and unquestionably draw much larger crowds of shoppers.

In this store there apparently existed a very real danger of overdoing special event selling. There already were 36 store-wide sales of one day each, two store-wide sales of two weeks each, and one store-wide sale of one week. All these store-wide special events apparently were in addition to the usual type of semiannual clearance sales, unless the latter were combined with the semiannual remnant sales in August and February.

It is to be noted that for these store-wide sales events the planned mark-ups were stated as percentages of the "usual retail price." Thus if buyers were able to obtain substantial concessions in price from manufacturers, the average mark-up on actual selling price might well approximate or even exceed the normal mark-up. It is important, however, to consider the possible reactions of manufacturers to such tactics. If a department store buyer approaches a manufacturer not more than once or twice a year with a request for substantial price

² See case of the Bellvanise Company, 5 H.B.R. 321.

concessions, the manufacturer may be entirely willing to grant the buyer's requests, especially if these requests come at times when the manufacturer desires to clean out stocks of seasonal merchandise. When, however, department store buyers seek to obtain price concessions from manufacturers as frequently as they apparently did in this case, the reaction of the manufacturers can scarcely be favorable. Indeed, there is every reason to suppose that under these circumstances manufacturers will tend to lower the quality of the merchandise sold to stores for such special sales events.

There is furthermore the consideration that a large retail sales volume obtained by forced methods is less satisfactory in the long run than a normal growth of sales. Sales volume obtained through special sales events is less solidly based on consumer goodwill and consequently more difficult to retain permanently. Stores relying largely on special sales events as a means of sales promotion find it increasingly difficult to maintain the same rate of increase in sales from year to year. Consumers tend to become "sales wise," and increased doses of the same stimulant become necessary to hold their interest.

There are strong reasons for believing that it would have been a serious mistake for the Scanlan Company to undertake the proposed program of special departmental sales events on top of its existing program of store-wide sales. Even if the number of store-wide sales had been substantially reduced, it still is doubtful whether a program calling for a special sales event featuring specially purchased merchandise in some one department on each day of the week would have been a sound policy. A more suitable policy would have been the adoption of a modified program of special departmental sales events in place of some of the store-wide sales.

It is to be noted that the total expense of this store, 31.5% of net sales for 1922 and 1923, was higher than the typical total expense figures as reported by the Harvard Bureau of Business Research for stores with sales between \$4,000,000 and \$9,999,000 for those years, and also that the net profit figures of the Scanlan Company, 3.0% for 1922 and 3.25% for 1923, were both lower than the typical net profit figures for the stores in the previously mentioned volume groups. On the other hand, the Scanlan Company's rate of stock-turn for both years was somewhat higher than the typical figures for stores of the same approximate sales volume.³

May, 1929

M. P. M.

³ Harvard Bureau of Business Research, Bulletin No. 37, *Operating Expenses in Department Stores in 1922*, page 62, Table 27; and Bulletin No. 44, *Operating Expenses in Department Stores in 1923*, page 80, Table 33.

TASP & COMPANY¹

DEPARTMENT STORE

SALES PROMOTION—*Use of Special Departmental Sales Events.* In June, 1924, a department store which, as a result of a business depression, was having difficulty in maintaining a sales volume equal to that of the corresponding period of the previous year, believed that without special merchandising efforts total net sales for the year would be less than in 1923. The management decided to double the planned sales increase for the fall season of 1924 over that of 1923, apportioning it among the store's divisions in approximately the ratios which each division's sales bore to total sales of the store. To secure this increase in sales, the store was to hold a series of special departmental sales events during the last 5 months of the season, for which buyers would attempt to purchase lots of merchandise at prices 20% to 30% lower than the usual prices for the same grade of merchandise. The store's past experience with departmental sales events had been that about 60% of them were successful.

(1924)

In common with many other eastern department stores, Tasp & Company, in the spring of 1924, had difficulty in maintaining a sales volume equal to that of the corresponding period of the previous year. This tendency towards decreased sales was ascribed to a business depression and not to competitive conditions. Each year since 1914, except in 1922, the net sales of Tasp & Company had increased over the sales of the preceding year, as shown in Exhibit 1.

In June, 1924, however, there was every indication that, unless an improvement in business conditions occurred, or some special merchandising efforts were successfully made during the fall season, the total net sales for the year would be less than those of 1923. The executives of the store believed that the existing personnel could sell, without extra assistance, from 10% to 15% more than the sales which had been planned originally for the fall of 1924. The executives, consequently, sought to devise some means of stimulating sales during the fall season.

¹ Fictitious name.

Tasp & Company specialized chiefly in the sale of medium-price goods. One of the upper floors of the store, however, was divided into a number of exclusive shops in which were displayed originals and copies of imported merchandise. This method of merchandising was used to attract the upper strata of consumers. The merchandise in these shops equalled in price and quality that sold by some of the exclusive shops of the city. In order to appeal also to customers who desired low-price merchandise, the store operated a bargain basement as an entirely distinct merchandising organization. The management was satisfied with the results obtained in the bargain basement.

EXHIBIT I

SALES, EXPENSES, MARK-DOWNS, AND GROSS MARGIN OF TASP & COMPANY, 1914-1923

YEAR	SALES	EXPENSES	MARK-DOWNS	GROSS MARGIN FOR THE YEAR
	Net Change from Previous Year	Net Change from Previous Year	Net Change from Previous Year	
1914.....	+ 4.3%	- 7.3%	-26.2%	27.1%
1915.....	+ 2.0	- 4.4	- 8.1	27.3
1916.....	+19.9	- 6.7	-29.8	28.0
1917.....	+12.6	+ 3.3	-10.0	29.1
1918.....	+ 6.9	-11.4	+11.1	28.3
1919.....	+13.0	+ 3.6	+27.5	27.8
1920.....	+22.1	+ 1.7	+ 2.0	28.3
1921.....	+ 8.5	- 2.7	+67.3	26.7
1922.....	- 1.8	+ 3.1	-33.3	30.0
1923.....	+ 9.3	- 3.4	+ 1.7	30.3

Tasp & Company employed in the main store approximately 1,850 people: 550 sold merchandise in the various departments; 300 were classified as indirect selling employees, such as stock clerks; and the remaining 1,000 employees comprised the non-selling personnel.

The departments in the main store were divided as follows into divisions, each of which was under the control of a division manager:

DIVISIONS	DEPARTMENTS
A	Gloves; glove and garment cleansing; neckwear; jewelry; hosiery; veilings; leather goods; Christmas gift departments; umbrellas; toilet goods; handkerchiefs; knit underwear.
B	Boys' clothing, furnishings, and hats; shoes; camp outfits; luggage; men's clothing and hats.
C	Men's furnishings.
D	Men's and boys' shoes; children's shoes; girls', misses', and women's shoes.
E	Girls', misses', and women's millinery.
F	Furs.
G	Misses' suits, coats, and dresses; women's suits, coats, and dresses; bathing suits; the style shops.
H	Muslin underwear; petticoats; house garments; aprons; sick-room supplies; infants' departments; girls' and juniors' coats and dresses; misses' and girls' waists; women's waists; skirts; sweaters.
I	Corsets and brassieres.

After consideration of the situation in June, 1924, the management of Tasp & Company decided that it would be desirable to double the planned increase of sales for the main store in the fall of 1924 over the fall of 1923. Under the revised plan sales would have to be increased approximately \$1,000,000.

The management, therefore, asked the division managers to suggest methods of securing the desired increase in sales volume. The division managers proposed that a series of special sales events be held during the last five months of the fall season, October through February. For these special sales, the department buyers would undertake to purchase lots of merchandise at prices 20% to 30% below those at which the store usually purchased the same grade of merchandise. Stock inventories were not to be increased except temporarily. In no case were the planned stocks at the end of February, 1925, to be increased. The management desired to have none of the specially purchased merchandise on hand for the spring season, which began March 1, because styles presumably would have changed by that time. The store's financial position was strong, and purchases of additional merchandise could be made without taxing the company's credit. The division managers proposed to apportion the \$1,000,000 sales increase among the divisions in approximately the ratios which each division's sales bore to the total main-store sales.

Planned and actual figures for the main store for the fall seasons of 1922 and 1923, and planned figures for the fall of 1924, were as shown in Exhibit 2.

The number and the dates of the sales events which each department would hold would depend upon the size of the special lots of merchandise which each buyer could purchase from the manufacturers and wholesalers with whom he did business, the time of year when the lots would be available, and the planned volume of increased sales which had been allocated to his department. For instance, the buyer for the toilet goods department proposed to purchase six lots of perfume, soap, and cosmetics, to retail at \$2,300, \$6,800, \$1,970, \$3,700, \$13,280 and \$4,200; whereas the buyer for the jewelry department proposed to purchase only one lot of watches, to retail at \$2,400.

EXHIBIT 2

PLANNED AND ACTUAL SALES, MARK-DOWNS, GROSS MARGIN, TOTAL EXPENSE, AND STOCK-TURN, IN MAIN STORE OF TASP & COMPANY
FOR FALL SEASONS, 1922-1924

DIVISION	SALES					
	Planned 1922	Actual 1922	Planned 1923	Actual 1923	Originally Planned 1924	Planned 1924 with \$1,000,000 Increase
A	\$1,444,000	\$1,307,000	\$1,427,000	\$1,393,000	\$1,506,000	\$1,785,000
B	552,000	545,000	611,000	654,000	781,000	898,000
C	404,000	333,000	374,000	356,000	398,000	417,000
D	416,000	316,000	367,000	318,000	380,000	428,000
E	168,000	146,000	169,000	159,000	283,000	307,000
F	472,000	486,000	535,000	470,000	538,000	605,000
G	1,659,000	1,442,000	1,768,000	1,570,000	1,887,000	2,116,000
H	1,436,000	1,164,000	1,324,000	1,314,000	1,491,000	1,657,000
I	128,000	104,000	109,000	107,000	111,000	121,000
Total Main Store....	\$6,679,000	\$5,843,000	\$6,684,000	\$6,341,000	\$7,375,000	\$8,334,000

MARK-DOWNS
(Net Sales = 100%)

A	6.0%	7.9%	6.5%	9.7%	6.7%	
B	8.5	11.2	8.3	9.0	7.0	
C	5.5	9.7	6.5	10.1	8.0	
D	7.9	11.3	8.1	9.3	9.0	
E	10.5	13.0	11.0	14.3	10.3	
F	7.2	10.8	9.2	12.2	8.4	
G	7.8	9.5	7.9	10.6	8.4	
H	7.0	7.6	6.2	7.9	6.4	
I	3.6	5.1	6.3	5.0	6.2	
Total Main Store....	6.8	9.2	7.3	9.7	7.6	

EXHIBIT 2 (Continued)

DIVISION	GROSS MARGIN (Net Sales = 100%)				
	Planned 1922	Actual 1922	Planned 1923	Actual 1923	Originally Planned 1924
A	31.1%	29.3%	31.2%	28.9%	30.6%
B	27.6	28.1	27.0	26.1	28.9
C	30.2	28.9	29.7	27.4	29.1
D	29.8	29.3	28.2	27.5	30.6
E	37.6	40.3	40.3	37.8	39.9
F	36.9	33.7	33.7	30.2	36.7
G	30.0	30.8	30.1	28.7	30.7
H	30.0	29.2	30.2	29.0	29.5
I	34.5	31.5	31.2	32.5	32.2
Total Main Store.....	30.5	28.5	30.4	28.7	30.9

EXPENSE (Net Sales = 100%)					
A	.....	23.1%	22.3%	23.2%	21.5%
B	.....	29.5	27.7	27.8	24.9
C	.....	26.7	23.9	24.5	24.9
D	.....	28.5	27.1	27.3	26.4
E	.....	38.3	36.3	35.6	32.0
F	.....	21.4	20.6	20.6	18.4
G	.....	27.7	25.5	26.3	22.7
H	.....	29.5	27.4	27.6	25.0
I	.....	30.5	27.7	27.4	27.1
Total Main Store.....	.....	25.5	25.4	26.1	23.6

DIVISION	STOCK-TURN (Times Per Season)				
	Planned 1922	Actual 1922	Planned 1923	Actual 1923	Originally Planned 1924
A	2.9	2.3	2.5	2.3	1.7
B	2.0	1.9	1.7	1.9	1.9
C	3.5	2.7	2.2	2.3	2.1
D	1.7	1.3	2.2	1.3	1.4
E	3.7	3.1	3.7	4.1	4.2
F	2.0	2.1	2.3	2.0	2.5
G	4.7	4.2	5.0	5.3	5.6
H	4.2	4.2	4.6	5.4	4.3
I	2.4	2.2	2.1	2.4	3.1
Total Main Store.....	3.1	2.8	2.9	2.9	2.9

In 1915 Tasp & Company had discontinued store-wide sales because of the strain which they had placed on the store's selling and service personnel. Since then, the store had used departmental sales events as a means of disposing of specially purchased lots of merchandise. Departmental sales events were considered more satisfactory than store-wide sales, because the buyers frequently could purchase first-quality merchandise at low prices during the middle of the season when manufacturers had difficulty in obtaining orders.

The store's experience with its departmental sales had varied. Frequently, specially purchased merchandise was not disposed of during the special sales, and had to be carried in stock. Because the identity of such merchandise was lost, it was impossible to determine accurately the success or failure which had attended special sales events in the past. The management estimated, however, that approximately 60% of the departmental sales had been successful. It was thought that 40% of the store's previous departmental sales events had been either partial or complete failures. In some instances, the buyers had purchased lots of merchandise which included both good and poor values; the customers soon had discovered and purchased the best merchandise, and the store then had had to sell the remainder of the lots at substantially reduced prices.

The series of sales events which the division merchandise managers planned for the fall season of 1924 differed from those which the store had held previously only in that the special purchases were to be planned carefully in advance. These goods were to be bought by the same methods used in buying special lots in the past: the purchasing of manufacturers' surplus stocks, the placing of orders for mid-season delivery, and the exertion of pressure to procure price concessions. The division managers planned to have no increase in expense, with the exception of a \$50,000 additional advertising appropriation.

One of the division managers submitted the following set of instructions which he planned to give to his buyers:

1. The sales events are to be big, outstanding events on wanted merchandise—not a series of small sales.
2. The values are to be so strong and the type of merchandise so distinctly in demand that the sale will clean up in one to three days and will not lag over a period of time. If this is done, the sales

resulting will be really additional sales. You will avoid loading your stocks with odds and ends left over from sales lots. This last point must be watched carefully by each buyer, and every effort must be made to clean up.

3. While it is hoped that the mark-up on this merchandise will be reasonably close to normal, it is expected that in some cases we shall be obliged to take a somewhat lower profit.

4. Before closing any deal, the buyer must submit the proposition to the division manager or the merchandise office. If possible, samples should be submitted for inspection, and if acceptable, the full cooperation of the publicity office will be obtained. We are assured that every event will be given generous publicity.

5. The amount of additional sales volume which is required from you, as shown in the special departmental sales plan, must be obtained.

6. Detailed buying plans must be submitted to the division manager, and a tentative plan for the operation of these special events must be outlined month by month to show how much of your quota you expect to fill each month.

Part of the special sales plans of the buyer for one of the shoe departments, showing typical concessions from manufacturers and typical mark-ups, was as follows:

Articles	Quantity to Be Purchased	Mfr's Regular Price	Mfr's. Special Price	Retail Price
Tan Lace Boots—sizes 5 to 8.....	632 pairs	\$1.90	\$1.50	\$2.00
Patent Cloth-Top Button Boots—sizes 5 to 8.....	355	1.90	1.50	2.00
Tan Lace Boots—sizes 8½ to 11.....	366	2.60	2.00	2.85
Patent Cloth-Top Boots—sizes 8½ to 11.....	270	2.60	2.00	2.85
Tan Button Boots—sizes 5 to 8.....	209	1.90	1.50	2.00
Patent White-Top Shoes—sizes 5 to 8.	120	1.90	1.50	2.00

The average mark-up on the special purchases was expected to be from 30% to 33%. Division managers proposed to have samples of as many special lots as possible submitted to the merchandise office before the sales events; a representative of the comparison office then was to shop other stores to see whether the buyers' proposed prices were materially lower than those charged by competitors.

The management of Tasp & Company decided to undertake the planned program of special departmental sales events.

COMMENTARY: An organized program of special departmental sales events covering a limited period of time is to be distinguished from a policy of store-wide sales such as described in the Bellvanise Company case,² and also from a policy of conducting special departmental sales at opportune times in particular departments.

In any appraisal of the soundness of Tasp & Company's decision, it is desirable to take account of the probable effect of the proposed program on volume of sales, on gross margin, on the total expense ratio, and on the rate of stock-turn.

As regards volume of sales, the proposed program of special sales events might be expected to result in some increase, because of the price inducements offered and the additional advertising. Gross margin is, of course, primarily the resultant of original mark-up and mark-downs. The proposed program might be expected to reduce original mark-up substantially, particularly if the plans cited for the shoe department are typical. With regard to mark-downs there was reason to believe that these might be increased, because of the necessity of further price reductions to dispose of merchandise left over from the special sales. On the other hand, if substantially all the merchandise bought especially for the sales events could be disposed of at the time of the sales, the ratio of mark-downs might be decreased. Weighing all these factors in the balance, it appears that the gross margin for Tasp & Company was likely to be lowered.

In theory the effect of these special sales on the total expense ratio should be to reduce it, because of the presumed larger volume of sales over which to spread indirect and overhead expenses. On the other hand, it must be pointed out that certain expenses, such as advertising, possibly wages of salesforce, and certainly buying expense, were likely to be increased because of this program.

If a substantial volume of merchandise was purchased especially for these sales, the rate of stock-turn might be increased. The actual realization of this result, however, depended on the rapid disposal of most of the merchandise during the period of the special events. If substantial quantities of the specially bought merchandise were left over, no improvement in the rate of stock-turn was likely.

In view of the experience of the management that approximately 40% of departmental sales in the past had not been successful, it seems a fair supposition that the final net profit resulting from the interaction of the various factors of sales volume, gross margin, total expense, and rate of stock-turn would not be satisfactory.

Additional factors to which the management should have given consideration were the possible effects of its special sales program in

² 5 H.B.R. 321.

trading down the quality of the merchandise, in causing dissatisfaction among manufacturers who might resent the exertion of pressure to procure price concessions, and in lowering the prestige of the store in the minds of its clientele.

A final point may be urged. The data in Exhibit 2 do not indicate that Tasp & Company had been particularly successful in correlating its actual performance with its planned sales, planned gross margin, and planned total expense. Its plans had erred on the side of optimism. Yet in the face of a tendency to declining sales volume, it was proposed arbitrarily to increase the planned sales figure for the fall season of 1924 by approximately \$1,000,000. It may be reasonably pointed out that a program of this kind was not in accordance with sound policies and methods of merchandise planning, particularly when it is remembered that special purchases of the kind proposed inevitably have a disrupting effect on price lines, sizes, color assortments, and so on.

The present commentator does not mean to imply that a department store faced with an apparent declining tendency in volume of sales should passively accept the situation as inevitable. On the other hand, he believes that a program of forced stimulation of sales by means of special departmental events not only was unsound in these particular circumstances, but in general is not compatible with sound policies and methods of merchandise planning and control.

June, 1929

M. P. M.

WALBOURNE COMPANY¹

DEPARTMENT STORE—FURS

SALES PROMOTION—*Continuance of Special Sales Event.* In a department store which, in common with other stores, for several years had held a fur sale in August, in order to smooth out its sales curve by increasing sales volume in a dull month, the desirability of continuing to hold this sale was questioned. During the past few years the sales volume realized from this sale had not equalled that of earlier years. The merchandise manager believed that because manufacturers regarded the August business as assured, they had raised their prices accordingly, with the result that these sales were beginning to lose the support of the public. Despite his objections to the August fur sale, the merchandise manager decided to continue it, because it was an established event and because without it the store as a whole would make a poor showing for the month of August.

(1922)

Early in June, 1922, when the fur buyer and the merchandise manager of the department store operated by the Walbourne Company were making their plans for the annual August fur sale, the question arose whether it was desirable to continue holding this sale.² In 1911, the Walbourne Company had established the policy of having a fur sale in August in order to help smooth out its sales curve by building up the volume during one of the duller months in the year. In order that they might smooth out their own seasonal peaks, fur manufacturers had been willing to quote attractive prices. Other stores had followed the example of the Walbourne Company; and in a few years the August fur sale had become an established custom in the city.

The August fur sale of the Walbourne Company, during the five years immediately preceding 1922, had not equalled in volume

¹ Fictitious name.

² In order to increase sales, several competitors of the Walbourne Company had decided to sell furs on the instalment plan. Under this plan an initial payment was to be made on the garment and the remaining amount paid in monthly instalments, over a period ranging from five to ten months in length. Garments sold on the instalment plan were priced higher than those sold for cash or on open accounts. (See case of the Mayo Company, David, D. K., and McNair, M. P., *Problems in Retailing*, A. W. Shaw Company, 1926, page 698.)

the August fur sales of earlier years. It was generally conceded that the small volume in 1920 was the direct result of the high prices then prevailing. Regarding the other years, neither the fur buyer nor the merchandise manager was sure whether the explanation of the decline lay in higher prices, in less attractive values, or in the fact that the novelty of the sale was wearing off. The impression was prevalent, however, both in the Walbourne Company's store and in competing stores, that the August fur sale was no longer the important sales event that it had been.

During the normal fur selling period the initial mark-up on furs ranged from 40% to 45% of the retail prices, and the maintained mark-up varied from 37% to 38%. These high initial mark-ups were caused by the short selling period, the heavy expense incurred in maintaining the department, and the necessity of taking substantial mark-downs later in the season. The maintained mark-up of 37% to 38% usually was sufficient to yield a net profit of from 1% to 3% of net sales. When the August fur sale had been instituted, the Walbourne Company had made its initial mark-up for the sale 30% or 31% of the selling prices, and in the early years of the sale it rarely had used a mark-up higher than 33%.

In 1911 and the years immediately following, cash discounts offered by manufacturers had been 8% 10 days, with December 1 dating. By 1921 the discount had not changed materially, for the fur buyer of the Walbourne Company in that year had bought a considerable part of his merchandise for the August sale on terms of 7% 10 days, December 1 dating, and a somewhat smaller part on terms of 10% 10 days, with no postdating.

Neither the discounts obtained nor the initial mark-up had changed materially; yet the management was convinced that the fur department was not giving customers as good values as it had in the August fur sales in earlier years. The impression was general that this special sales event had been so firmly established that manufacturers had come to consider the August business assured and had raised their prices accordingly. In his study of the question the merchandise manager of the Walbourne Company reached the conclusion that special seasonal sales events of the general type of the August fur sale moved in cycles of three stages: the first stage was characterized by attractive values and the effective cooperation of retailers and manufacturers; the second

stage came when either the retailers or the manufacturers, or both, began to think themselves sure of the business and hence to reduce the amounts of their price concessions; and the third stage was reached when these special sales events began to lose the support of the public.

The merchandise manager concluded that the August fur sale was in the third stage, and that it might be the part of wisdom for the Walbourne Company to seek a substitute. The desired sales volume could be obtained only by holding a special sale in one of the store's major departments. Cloth coats seemed the most likely possibility.

It was evident, however, that cloth coats in many ways were not so well suited as were furs for a special off-season sales event. The style for fur coats usually was set with some definiteness by June. For cloth coats, on the other hand, a buyer in June seldom could predict with certainty developments as to the trimming, color of cloth, or type of fabric. Furthermore, the style of garment, and even the materials preferred, sometimes changed radically after the fall fashion shows. Also, the manufacturers of cloth coats did not have so highly seasonal a business as did the fur garment manufacturers.

An additional reason for the merchandise manager's desire to find some new means of increasing sales volume in August was that the August fur sale occasioned a considerable amount of extra expense for selling. When a sales force had been built up for the August sale, the management usually found it impracticable to discharge those extra salespeople in September, and preferred to carry them until the normal fur business began in November and December.

In spite of all the objections to the August fur sale, however, and in spite of the impression prevalent in the Walbourne store that nearly the same volume of furs could be sold during the regular season without the August sale, the merchandise manager was loath to give up the sale, because it was an established event, and because without it the store as a whole would make a poor showing for the month of August.

The merchandise manager decided not to give up the sale.

COMMENTARY: The experience of the Walbourne Company with annual August fur sales is thoroughly typical. The only possible justification which such sales ever had was the offering of merchandise

to the public at lower prices than those prevailing during the fall and winter. While, as indicated in the statement of the case, such special off-season sales events originally served the purpose of permitting both manufacturers and stores to fill in seasonal depressions in their respective businesses, it became increasingly difficult to offer genuine price advantages to consumers when August fur sales became routine practice for practically all department stores.

Under these conditions there was a tendency for some stores to begin August fur sales in July. Difficulties also were encountered because some stores during November and December offered furs at marked down prices below those which had obtained during their August sales. Competing stores in particular cities found it difficult to maintain among themselves agreements not to reduce fur prices below August levels until after Christmas.

For these reasons, and also because of the widespread abuse of comparative prices in the advertising of August fur sales, customers have progressively tended to lose confidence in these events.

In deciding to continue the August fur sale, the management of the Walbourne Company followed the path of least resistance. Any appraisal of the soundness of this decision must of course take into account the competitive difficulties that would have been encountered by the Walbourne Company had the management decided to discontinue the August sale of furs. In the absence of an agreement among leading department stores looking to the simultaneous abandonment of August fur sales, only a store in a distinctly strong competitive position would be likely to initiate such a change in policy. This, as a matter of fact, is what happened in New York City in 1929 when a leading department store abandoned the August fur sale, for the following stated reasons, as reported in the *Dry Goods Economist*, April 20, 1929:

"The volume of buying for August fur sales is now so large that it results in actual speculation in skins, and as manufacturers count on doing a large part of their season's business in preparation for the advance sales, the price concessions are very meagre indeed. It is our belief that in several seasons in recent years, due to unseasonably warm weather and surplus stocks, customers who purchased furs during August in the expectation of saving money could have duplicated their purchases two or three months later at lower prices. In addition to this endangerment to customers' goodwill and the risk of having the prices of raw skins bid up because of the early buying, there is the added consideration that the large investment in stock before the customers' style preferences can be registered is out of harmony with modern and profitable merchandising."

This case also suggests the general question whether it is worth while to attempt any type of artificial stimulation of sales in an ordinarily dull month. According to data obtained by the Harvard Bureau of Business Research,³ the variation in monthly sales for 108 department stores with net sales of over \$1,000,000, on the basis of average monthly sales in 1923, 1924, and 1925 as 100, was from low points of 77.9 in February, 77.7 in July, and 79.8 in August, to a high point of 165.7 in December. This pronounced seasonal variation of sales is apparently so characteristic of department store business that it raises the issue whether some account of this factor should not be taken in the monthly allocation of indirect and overhead expenses, with a view to absorbing the greater part of such expenses in months when sales are above average. Such methods of accounting presumably would prevent net losses from being shown in February, July, and August, and thus might possibly lessen the urge to resort to artificial stimulation of sales at such times.

June, 1929

M. P. M.

³ Harvard Bureau of Business Research, Bulletin No. 57, *Operating Expenses of Department Stores in 1925*, Table 8, page 23.

NOLTON COMPANY¹

VARIETY CHAIN STORES—DRAPERIES

SALES PROMOTION—*Special Sales Event in Dull Period.* A company operating a chain of 25-cent to \$1 stores in 63 cities divided the merchandise sold into 30 departments, each of which was under the direction of a merchandise manager in the central office. A gross margin quota, which the merchandise manager was held responsible for securing, was set by the company for each department. In a month when sales in the drapery department ordinarily were low, the merchandise manager for that department received from a manufacturer an offer of finished curtains at a price which would permit their sale as a leader. Although a selling price low enough to attract consumers' attention would necessitate a gross margin substantially lower than that set for the department, the merchandise manager decided to accept the manufacturer's offer in order to increase sales during a dull month.

(1924)

The Nolton Company operated a chain of 25-cent to \$1 stores in 63 cities in the United States east of the Rocky Mountains. There were 68 stores in the chain. The merchandise sold in the stores was divided into 30 departments. The company offered regular lines of merchandise, and also special merchandise at lower-than-market prices whenever it could make special purchases. In the central office, there was a merchandise manager for each of the departments. The merchandise managers were allowed latitude in the management of their departments. They made the purchases, planned special sales, and advised the store managers regarding sales and inventory quotas and selling prices for the merchandise of their departments.

Every six months each store manager submitted to the central office quotas for monthly sales and inventories, by departments, for the ensuing six months' period. The six months' periods were from February 1 to July 31 and from August 1 to January 31. The merchandise managers and officers of the company made such revisions in the quotas as they deemed advisable, and the revised

¹ Fictitious name.

quotas were returned to the store managers for approval. Store managers regulated their stock needs by requisitions, which were placed as frequently as necessary through the central office, in accordance with departmental planned sales for the month and the planned inventory at the end of the month during which the merchandise was delivered to the store. The merchandise was billed to the stores at cost, and shipped from the manufacturers or the company's central warehouse.

The drapery department had four noticeably dull months during the year: January, February, August, and September. In August, 1924, the merchandise manager of the drapery department received an offer of finished curtains at a price which permitted their sale as a leader. Curtains of this type were not sold regularly, because it was impossible to sell them profitably within the price range adhered to by the Nolton Company. The drapery department regularly sold curtain material by the yard, cretonne by the yard, and window shades. Because September was one of the dull months for his department, the manager was inclined to accept the offer, but inasmuch as a selling price low enough to attract attention would not permit the usual mark-up, he was in some doubt as to the advisability of acceptance. He usually had tried, however, to obtain sales volume during the dull months without regard to profits, making up any deficiencies in gross margin from higher mark-ups during the busy season.

Each department had a six months' gross margin quota which was the same throughout the chain for that department. Store managers were advised by the department merchandise managers regarding the retail prices that they should charge, but were permitted to vary the prices, provided they did not exceed the \$1 limit and provided each department showed at least the required gross margin at the end of the six months' period. In addition to setting the gross margin for the chain by departments, the company set an operating profit percentage on sales for each store. This operating profit was determined by deducting from the gross margin the amounts for pay-roll, light, heat, advertising, supplies, and other expenses which were under the control of the individual store manager. In general, the departmental merchandise managers were responsible for gross margin, and the store managers were responsible for operating profits.

The general policy was for the store managers to order merchandise from the department managers, who also could send unordered merchandise to the stores for special sales events, regulating the quantity sent to each store and the selling price. Such merchandise usually was from bargain lots which could be sold at attractive prices.

A manufacturer of window curtains in August, 1924, was without sufficient orders to keep his factory in operation. He offered the drapery department manager of the Nolton Company 15,000 pairs of curtains at 67½ cents a pair, to be delivered f.o.b. factory on September 6, net 10 days from date of invoice. The order was to be divided equally among the following kinds of curtains: plain scrim, hemstitched and ruffled; plain hemstitched marquisette; plain marquisette; fancy ruffled marquisette; dotted ruffled marquisette; and ruffled splash voile. These curtains regularly were sold by the manufacturer at varying prices, but his average price for such a lot was between 90 cents and \$1 a pair.

The merchandise manager of the drapery department knew that the price quoted was less than the manufacturer's usual price. He also knew that department and furniture stores regularly secured at least \$1 a pair for the first three kinds of curtains and from \$1 to \$1.50 a pair for the other kinds. By offering the entire lot at a price of 89 cents a pair, the Nolton Company, he believed, could attract attention to its stores and especially to the drapery departments.

If he should offer these curtains for 89 cents a pair, he thought that they could be sold easily, but he would secure a gross margin which was substantially less than the figure fixed for the drapery department. If he should sell them at \$1 a pair, the bargain might not be sufficiently attractive to appeal to customers. The curtains might not all be sold until October; and at that time customers would be likely to go to the stores where they usually purchased curtains. The busy season for draperies did not begin before the first of October. If the drapery department manager placed curtains on sale in September, the price had to be low enough to overcome seasonal buying habits.

Because September was a dull month in the drapery department, the regular sales force in the stores was sufficient to handle the increased volume of sales that a special sales event might

be expected to produce. It would be necessary for each store to have an assortment totaling 200 pairs of curtains to support the advertising which each store manager would be expected to do for the sale. A delivery of this quantity to each of the stores would leave 2,400 pairs to be distributed to the various stores as the store managers might request, prior to the date of the special sales event. The number of pairs of curtains available for each store would not be enough to warrant advertising them unless the special event resulted in increased sales in other lines.

The company accepted the manufacturer's offer.

COMMENTARY: The purpose of the proposed special sales event in this case was primarily to increase the volume of sales during an ordinarily dull month for the drapery department. It was possible for the Nolton Company to obtain an advantageous price from the manufacturer because the latter was apparently in need of additional orders to keep his factory in operation.

Inasmuch as the Nolton Company's stores had sold only curtain materials and not finished curtains, and inasmuch as September ordinarily was a dull month for this department, it was probable that a substantial reduction in the usual retail price would be necessary to attract patronage. For these reasons it seems likely that 89 cents a pair was as high a price as the Nolton Company could safely place on this merchandise. At this retail price the mark-up over cost was 24.2% of the retail price. Even on the somewhat doubtful assumption that all the curtains could be sold at the price of 89 cents a pair, the gross margin to be realized promised to be substantially lower than the required gross margin for the department.

The normal operating expense ratio of the Nolton Company's stores is not stated, but it is reasonable to suppose that, even without any special advertising, this expense would be very close to the actual gross margin obtained on these curtains, especially since some part of this merchandise almost certainly would be left over after the sale and later might have to be marked down.

It should be borne in mind that in a chain of this kind both the departments, or merchandise classifications, and the stores are units of control, responsibility for the departments being placed primarily on merchandise managers in the central office and responsibility for the stores being placed to a considerable extent on the store managers. It is stated that the departmental merchandise managers were responsible for gross margin while the store managers were held responsible for operating profits. In this particular case it appears that the departmental merchandise manager, reasoning along the lines out-

lined above, might have looked unfavorably on the proposed special sales event. Quite a different line of reasoning, however, might have suggested itself to the store managers, somewhat as follows: "Certain fairly definite expenses will be incurred during the month of September. In addition to expenses of a fixed character, the personnel requirements over a short period are not subject to much change. Probably no additional salespeople will be required to sell these curtains. Therefore any gross margin actually realized on this special sales event will be largely a pure gain. If it does not actually swell the volume of net profit, it will in any event help to absorb a certain amount of fixed overhead expense."

Finished curtains, however, being an item of merchandise not previously sold by the Nolton stores, the question may be raised whether display alone would have moved the merchandise with sufficient rapidity, especially at a time somewhat early in the season for the sale of such goods. It was planned to allot 200 pairs of curtains to each store. If all were sold at the original price, the total sales of this merchandise for each store would thus be \$178, of which \$43 was the highest possible amount which could be retained as gross margin. Thus the possible amount of sales and of gross margin to be realized was so small in dollars and cents for each store that practically no advertising could be used unless the company aimed to take a definite loss on this merchandise with the expectation of making it up in increased sales of other goods.

It appears, therefore, that the decision of the company to accept this offer must have been predicated on a definite plan of using these curtains as a "loss leader." There are numerous differences of opinion in regard to the effectiveness of using loss leaders as a sales promotion policy. Personally the present commentator doubts the soundness of the Nolton Company's decision in this case.

May, 1929

M. P. M.

KILLARNEY COMPANY¹

DEPARTMENT STORE—MEN'S SHIRTS

SALES PROMOTION—*Reduction in Number of Special Sales Events.* The men's furnishings department of a department store had been accustomed to hold approximately 30 special sales of shirts a year, 15 in the spring season and 15 in the fall season. The buyer had considered these special sales necessary because of the frequent sales of competitors and also because of his desire to increase the sales volume of his department. Because the merchandise manager believed such frequent sales were detrimental to the company's reputation and less profitable than the regular sale of merchandise, he reduced the number of special sales of shirts to 10 in the spring season of 1924 and planned to reduce the number to 5 during the fall season.

(1924)

The buyer in the men's furnishings department of the Killarney Company had been accustomed to hold approximately 30 special sales of shirts a year, 15 in the spring season and 15 in the fall season. Special sales of other merchandise in the department were held infrequently. The buyer had considered the sales of shirts necessary because of the frequent shirt sales of competitors, and also because of his desire to secure a steadily increasing sales volume in his department. The merchandise manager was of the opinion, however, that the special sales were detrimental to the reputation of the Killarney Company and that they were less profitable than the routine sale of merchandise. In the spring season of 1924, therefore, he reduced the number of special sales of shirts to 10, and planned to reduce the number to 5 during the fall season of 1924. This decision was reached in spite of the buyer's protest that he could not meet competition and that sales in his department would be reduced by 25% if the number of special sales was curtailed.

The Killarney Company operated an attractively equipped department store in which the annual volume of sales was more than \$10,000,000. Sales were made chiefly in the medium and high-medium grades of merchandise. In the men's furnishings

¹ Fictitious name.

department, sales in 1923 were approximately \$110,000; a substantial proportion of this amount represented purchases by women.

The following description was given by the merchandise manager of a typical sale of shirts in the spring of 1923:

We bought 500 dozen broadcloth shirts at \$19.50 a dozen to sell at \$2.55 each; the regular selling price was from \$3 to \$3.25. The sale lasted from Saturday to Saturday, inclusive. There remained after the sale 280 dozen shirts, which we marked back to \$3 each, at which price 65 dozen were sold.

Later we reduced 215 dozen to \$2.65 for another sale. After this sale we had on hand 188 dozen in broken sizes and colors. We purchased another lot to fill out the sizes and colors and held another sale at \$2.35. One hundred nine dozen of the original lot of shirts remained after the sale; we put them in a clearance sale at \$1.85 and sold 31 dozen.

We reduced the remaining 78 dozen to \$1.35 the following month and had 41 dozen on hand at the end of that sale. At the next clearance sale we reduced them to 95 cents and sold all but 6 dozen, which we closed out to a junk dealer at \$3 a dozen.

Exhibit 1 shows the operating figures of the men's furnishings department for the spring season of 1924, after the reduction in number of special sales of shirts, as compared with the spring season of 1923.

EXHIBIT 1

OPERATING FIGURES FOR MEN'S FURNISHINGS DEPARTMENT OF
KILLARNEY COMPANY, SPRING SEASONS 1923 AND 1924
(Net Sales = 100 %)

	1923	1924
Inventory January 1, at retail.....	\$29,500	\$28,300
Purchases at cost.....	46,000	39,300
Purchases at retail.....	75,200	65,800
Sales.....	56,500	50,500
Mark-downs.....	5,350	4,790
Inventory June 30, at retail.....	42,850	38,810
Original mark-up.....	38.7 %	40.2 %
Gross margin.....	31.9 %	32.5 %
Total expense.....	30.8 %	28.4 %
Net profit.....	1.1 %	4.1 %
Stock-turn for season.....	1.7 times	1.85 times
Amount of average sales check.....	\$2.90	\$2.95
Advertising expenditure.....	\$ 3,060	\$ 2,480
Advertising expense percentage.....	5.4 %	4.9 %

COMMENTARY: Department store executives commonly estimate that from 80 to 90% of the sales of men's furnishings in department stores are made to women, except in cases where men's furnishings departments are part of a men's store operated more or less separately from the main store. The frequency with which special sales of men's shirts were held in the men's furnishings department of the Killarney Company probably indicates a belief on the part of the management that women are easily attracted by bargain appeals.

As illustrated in this case, unsatisfactory results from special sales events frequently may be incurred if substantial quantities of the specially bought merchandise are left in stock after the time set for the duration of the sales event has expired. In this case the total net sales of the 500 dozen broadcloth shirts amounted to \$13,863; the cost of this merchandise was \$9,750; consequently the gross margin was \$4,113. If the assumption is made that the total expense percentage, 30.8% of net sales, for this department for the spring season of 1923, could fairly be applied to this special sale of shirts, there was a resulting net loss of \$156.80. Even though such an assumption probably is not fully justifiable, it remains doubtful whether there was any net profit realized from these special sales if the event described may be taken as typical.

This apparently is a case where the special event type of sales policy had been overdone. It had evidently been carried to the point where net profit as a percentage of sales was distinctly low. It is probably significant also that the rate of stock-turn increased when the number of special shirt sales was reduced. In theory, special sales events ought to increase the rate of stock-turn, because merchandise specially bought for the occasion presumably is sold out within a relatively short time. Actually, however, so much merchandise may be left over from the special events that they may have the reverse effect on the rate of stock-turn.

The ratio of sales of shirts to total sales of the men's furnishings department is not known. A comparison of the operating results of the department for the spring seasons of 1924 and 1923, however, seems to indicate that the smaller number of special sales of shirts in the spring season of 1924 affected favorably the percentages of gross margin, total expense, and net profit. Not only was a higher original mark-up obtained, but mark-downs were reduced, and the rate of stock-turn was increased slightly. On the other hand there was a decline of \$6,000 in sales volume. This decline in net sales probably reflects the instability of sales volume built up on the basis of special event selling. It is quite possible that the Killarney Company would have had to expect a further reduction in sales volume, in case it followed a policy of curtailing special sales of shirts to five each season.

While the actual net profit in dollars was larger in the spring of 1924 than in the spring of 1923, a further decline in sales volume might have had the effect of reducing the actual dollar profit, because of the inevitable increase in the ratio of fixed expenses.

There is reason to think, however, that in the long run the men's furnishings department would have found itself in a healthier condition without so many special sales events.

April, 1929

M. P. M.

KIMM DEPARTMENT STORE¹

DEPARTMENT STORE—MISSES' SUITS

MERCHANDISING—*Purchase of New Style by Department Store.* The buyer for the misses' suit department in a department store selling medium-price merchandise, in the spring of 1924, had purchased a stock of suits copied from a newly designed Parisian model, called the O'Rossen suit, which exclusive shops were introducing at the same time. The suits were not so popular as had been expected, however, and the department's actual sales were substantially less than planned sales. In the autumn of 1924, the buyer decided to try to increase sales by selling "ensemble suits," another new style, which, however, already had been introduced in exclusive shops.

(1924)

For the spring season of 1924, the buyer of misses' suits in the Kimm Department Store had purchased a stock of suits copied from a new Parisian design. Actual sales of these suits, however, were less than planned. Because of this experience, the buyer hesitated to place orders for another new style which was being introduced early in the autumn of 1924.

The store, located near the center of the shopping area of a large New Jersey city, sold a wide variety of merchandise, including men's, women's, and children's ready-to-wear clothing, sporting goods, piece goods, house furnishings, rugs, and toilet goods. Most of the sales of the store were made at popular prices, although some higher-price merchandise was sold. The annual net sales of the store were about \$20,000,000.

The second floor of the Kimm Department Store included such departments as women's and misses' suits, dresses, coats, hats, and underwear. The misses' suit department was located on the center aisle of the floor and was the second section in front of a bank of seven elevators. In 1922 and 1923 the net sales of the misses' suit department had been: spring season, 1922, \$65,586; fall season, 1922, \$22,468; spring season, 1923, \$53,832; and fall season, 1923, \$15,598.

¹ Fictitious name.

In January, 1924, the managers of retail stores and the manufacturers of medium-price clothing and of high-price clothing expected women's suits to be popular in the coming spring season. O'Rossen, a Paris habit maker, had designed a severely tailored women's suit which was copied extensively by both these classes of manufacturers in the United States.

In general, styles in women's clothing originated in Paris and were shown at the "openings" of the leading Parisian dressmakers. Buyers from American manufacturers and retail stores which sold only merchandise of high quality attended these openings, observed the style tendencies, and purchased models. These models, or copies of them, then were brought to America and either were placed on sale at once in the shops selling exclusive styles or were reproduced by the manufacturers. Only the stores carrying high-quality merchandise purchased these models in large quantities.

When it became apparent that a particular style was to become popular, the manufacturers of medium-price merchandise began to copy either the original Parisian model or a copy of it. The department stores selling medium-price merchandise then stocked these copies. As the demand increased, the manufacturers of the cheapest grade of merchandise reproduced the style, which was sold finally in bargain basements and in stores carrying only the most inexpensive grades of merchandise. By this time, another new style had started in the stores selling exclusive merchandise. The popularity of a style, consequently, was in itself the cause of the eventual disappearance of that style.

For the spring season of 1924, in view of the apparent trend of fashion toward suits for women, the buyer for the misses' suit department of the Kimm Department Store introduced copies of the severely tailored O'Rossen suits. She hoped in this way to increase the prestige of the Kimm Department Store among those customers who purchased exclusive styles only. The retail prices of the suits ranged from \$20 to \$70. The buyer planned to make net sales of \$59,000 during the spring season of 1924, which lasted from February 1 to August 1.

The buyer obtained an average cash discount of 6% of net sales on all purchases for the misses' suit department. This discount the store treated as a merchandise profit, and, when the books were closed, added it to the maintained mark-up obtained

in the department in order to derive the gross margin of that department for the season. The buyer planned an original mark-up of 33% of net sales and a maintained mark-up of 29% of net sales for the misses' suit department for the spring season of 1924.

The actual net sales made in the misses' suit department during the spring season of 1924 were \$45,489. The original mark-up was 32.7% of net sales, but the actual maintained mark-up was only 24.8% of net sales. The advertising expense of the department increased from 5.9% of net sales in the spring season of 1923 to 6.3% of net sales in the spring of 1924. The department obtained a stock-turn for the season of 6.75 times, which was slightly higher than the previous average stock-turn.

The buyer had planned to have a stock of O'Rossen suits amounting to \$2,400 at retail prices on hand on August 1, 1924. In April, however, when she saw that the actual sales were substantially less than the planned sales and that the department was becoming overstocked, she reduced her planned purchases with the result that the inventory of those suits at the end of the season amounted to only \$873.

The merchandise manager in charge of the misses' suit department stated that the failure of the department to attain the planned sales was due to the fact that suits were not so fashionable in the spring of 1924 as the buyer had expected them to be.

Early in the fall season of 1924, several stores in and around New York began selling a combination suit, called an "ensemble suit," consisting of a dress and a coat to match. The buyer for the misses' suit department of the Kimm Department Store immediately investigated the situation regarding ensemble suits in the near-by stores. She found that, although these suits had not been purchased by the stores in large quantities, many of the exclusive shops were offering them, and that they seemed to be popular. The misses' suit department of the Kimm Department Store was not overstocked at that time, and the buyer decided to try to increase the sales of her department by selling ensemble suits. She purchased a stock of the ensemble suits but did not allow her department to become overstocked. Her planned net sales for the fall season of 1924 were \$16,000.

By December 1, 1924, 14.8% more suits had been sold in the misses' suit department than the buyer had planned to sell up

to that time. She planned sales of \$50,000 for the department for the spring of 1925.

COMMENTARY: The situation described in regard to the women's suit business of the Kimm Department Store is typical of that which faced many middle-price department stores in the spring of 1924.² The women's and misses' suit business had been very bad for a considerable period. All stores were looking for some new style to appear which would give new life to the sales of suits. When the extreme style of the O'Rossen model was brought out in Paris it was natural that manufacturers and retailers should look upon it as the one hope for additional suit business. The result was that the medium-price stores stocked this new model without waiting for the style to become established in the higher-price stores.

Styles move in fairly well defined cycles. Mr. Paul T. Cherington has described these divisions as follows: "The complete life-history of any vogue falls into five fairly well defined parts: (1) creation; (2) adaptation; (3) popularization; (4) large-scale production; (5) abandonment."³

The Kimm Department Store made an attempt to introduce a style in the middle, or third and fourth stages, of the style cycle. It did not wait for the higher-price specialty stores and higher-price manufacturers to go through the period of "adaptation" and part of the period of "popularization." The result of this attempt was, as is suggested in the case, a failure on the part of the Kimm Department Store to reestablish its suit business. It should have waited until the suits had been tried out and were established in the higher-price stores, rather than have attempted to anticipate the bulk of its business in these new suits.

On the other hand, we see in the Kimm Department Store case that another new type of suit, the "ensemble suit," was produced shortly after the introduction of the O'Rossen suit. The ensemble suit came through the ordinary and usual channels, in that it was first tried out and sold in the higher-price stores. By the time the Kimm Department Store was ready to buy ensemble suits, there was enough information available from the experiences of the higher-price stores to give the Kimm Department Store a basis for intelligent merchandising. The style was ready to be popularized.

There are certain conclusions which can be drawn from this case. Styles move in fairly well defined cycles. A retail store should find

² See Farrington Company, 2 H.B.R. 259.

³ "Some Commercial Aspects of Styles and Fashions in the Clothing and Textile Industries," *Harvard Business Review*, Vol. II, No. 4, pp. 421-433, inclusive.

its position with reference to the cycle and make sure that it merchandises its lines in accordance with its position. A store cannot create a style in women's garments, but must use its judgment in selecting from those styles which have been created and sponsored by the Paris designers.⁴

November, 1925

D. K. D.

⁴ For a most interesting and clear presentation of the seasonal progression of style, see the chart accompanying the article, "Some Commercial Aspects of Styles and Fashions in the Clothing and Textile Industries," by Paul T. Cherington, *Harvard Business Review*, Vol. II, No. 4, p. 430.

TILDEN COMPANY¹

DEPARTMENT STORE

INVENTORY—*Method of Taking, in Department Store.* A department store customarily took its semi-annual physical inventories during working hours; each inventory occupied approximately two weeks. The buyers were responsible for the listing and counting of the merchandise, and the merchandise manager and his assistants were responsible for the recounting and checking. A special inventory checking squad was used. It was suggested that, inasmuch as this method inconvenienced the sales force, it might be advisable to take the inventories after business hours, completing the count in one night. Another suggestion was that the inventories for the various merchandise departments should be taken at different times, either during business hours or after, at the convenience of the department concerned.

(1925)

In January, 1925, one of the assistant merchandise managers of the Tilden Company, who was in charge of taking the inventories, was dissatisfied with the method then in use because it inconvenienced the selling departments.

The Tilden Company, a general department store, was located between the exclusive shops and the low-price stores in the shopping area of a large eastern city. The annual net sales of the store were about \$17,000,000, distributed among 70 departments. The company's fiscal year corresponded with the calendar year.

The Tilden Company inventoried the entire stock in the selling departments and in the reserve stockrooms of the store during the two weeks preceding January 1 and during the two weeks preceding July 1. The total annual shortages of merchandise amounted to about \$150,000 at retail. Part of this shortage figure presumably was to be accounted for by inaccurate physical inventories. It was highly important, therefore, to take the inventories as accurately as possible. All inventories were taken on official inventory list sheets, a sample of which is shown as Exhibit 1. These sheets were made in three colors: white, pink,

¹ Fictitious name.

After the sheets had been distributed, the employees, in their spare time, listed the season letter, selling price, and quantity of each item of merchandise. Ditto marks could not be used to indicate the season letter, price, or quantity. Quantities and prices had to be listed in the same denominations: if the quantity was expressed in dozens, the price had to be given per dozen. The lister signed his name below the last item on the sheet. The buyer was responsible for this part of the inventory. Some of this listing was done after closing hours.

Finally, in each department, these inventory lists were checked by a special squad under the direction of the merchandise office, which was responsible for the checking of the counting and listing. Usually the checkers worked in pairs: one counted the merchandise and called out the item, season letter, quantity, and price; and the other placed a check mark in the proper column on the inventory sheet opposite each item checked and found correct. The stock listed on every sheet was checked with the actual merchandise and not with lists or memorandum slips of any kind. Checked sheets were left with the merchandise checked after the checker had signed his name at the bottom of each sheet.

In each department, after all the inventory sheets had been checked, on the night of the final day of the stock-taking period, the buyer and a representative of the merchandise office together collected the sheets, making sure that they obtained one from each section, drawer, case, shelf, rack, counter, reel, and table. After collecting the sheets, the buyer and the representative of the merchandise office arranged them in numerical order to make sure that none was missing. They then signed and dated the last sheet on which the merchandise was listed. These sheets were sent to the controller's office for computation.

The usual routine paper work of the store had to be prepared specially for the inventory period. The buyers had to see that all stock charged to their departments up to and on the final day of the inventory period was listed on the inventory sheets. In almost every department it was best to list any stock which might be in the receiving room and present the bill for it to the controller's office rather than not to list it and mark the bill "since." All bills for merchandise not listed on the inventory sheets were marked "since." Whenever possible, the buyers

tried to arrange that no merchandise should be delivered for a few days preceding the final day of the inventory period. Reduction sheets and mark-up sheets listing all price changes made before the close of the inventory, or a blank sheet, in case no changes had been made, were sent to the merchandise office. If merchandise had been received and charged to a department on the store's books, but was later to be returned to the seller, and if that merchandise was not to be counted in the inventory, return slips were made out for this merchandise. All merchandise for which sales checks had been made out had either to be out of the department or located separately so that it would not be listed. All merchandise transfers had to be completed before the final day of the inventory period. A careful check also was made of all merchandise returned for credit, to make sure that it was accounted for on the inventory sheets.

One-half the inventory period in December came during the rush of Christmas business, while during the second half of this period the stocks in the various departments were disarranged as a result of the Christmas rush. The inventory period during the latter half of June also came near the end of the season, when a number of special sales events were being held. These circumstances hindered the process of taking inventory.

The responsibility for listing and counting the merchandise under this system was placed on the buyer for the department; and the responsibility for recounting and checking was placed on the merchandise manager and his assistants. The special inventory checking squad, which was temporary, frequently consisted of as many as 60 store employees.

After the book inventory at retail was computed, the figures were compared with the results of the actual inventory taken in each department. If the overage or shortage for a department was about normal as compared with past experience, the book inventory was corrected and the books were closed. If the error was abnormally large, the inventory was retaken. A reserve account was carried which distributed the expected loss from stock shortages over the season so that no one month bore the entire loss.

A competing department store, which had a considerably larger volume of sales than did the Tilden Company, took its inventory throughout the store after business hours, and completed the

entire count in one night. As in the case of the Tilden Company, the inventory was taken at retail only, and the merchandise was listed only on official inventory sheets. Under no circumstances were separate lists made preliminary to or during stock taking, because past experience had shown that serious errors were incurred in copying from one sheet to another. Inventory sheets were distributed to the department managers as early as was reasonably desirable for inventorying the reserve stock, but no other stock was listed before the close of business on the evening when the inventory was to be taken. Sheets on which stock in reserve or stock anywhere outside the selling space was listed were marked to indicate the location of the stock. Whenever merchandise in reserve was taken to forward stock after having been listed, a deduction sheet had to be made out.

At least one week before the inventory was to be taken, each department manager had to show the controller a rough front-view sketch of each fixture in his department. Each of these fixtures bore a number, each vertical division in each fixture also bore a number, while each horizontal division was designated by a letter.

On the day preceding the taking of the inventory, inventory sheets were placed on the fixtures and were accounted for on a tally card provided for the purpose. It was necessary that an inventory sheet be placed in each subdivision of each fixture whether such a subdivision contained merchandise or not. There was a tally card at the back of each pad of inventory sheets. The whereabouts of each inventory sheet had to be recorded on this tally card before any listing was done.

The first of the inventory sheets in each department was marked "repairs," and all goods out of the department for repairs at the time the inventory was taken were listed on it. The second sheet was marked "window dresser;" the third sheet, "foreign office samples;" the fourth sheet, "goods in advertising office;" the fifth sheet, "goods held in private office;" the sixth sheet, "goods in department manager's own office;" and the seventh sheet, "goods in comparison department." On each of these sheets was listed any merchandise out of the department for the particular reason stated. If there were no goods outside the department, each of these seven sheets was marked "none" and signed by the department manager. If, for any reason, stock

was in any other place out of the department, a separate sheet was made out in each case.

If a department had separate stock classifications, each classification was listed on a separate inventory sheet. In all cases department managers had to see that imported and domestic stocks were listed separately.

After the inventory had been completed, the department managers, or their assistants, personally gathered the inventory sheets, making sure that there was a sheet from each section or subdivision and scrutinizing each sheet to estimate whether or not each section had been inventoried properly. A few sections selected at random were recounted in order to verify the accuracy of the original count, and the department manager, or his assistant, initialed such recount sheets. When all the sheets had been collected, they were arranged numerically, fastened together, and attached to the tally card. On every tally card the number of the last sheet used was indicated. Soiled or torn inventory sheets could not be destroyed, and all sheets had to be turned in whether used or not.

As a precautionary measure, all bills received during the five days preceding the date of the inventory taking were stamped "old stock—new stock" by the receiving department. If the merchandise listed on such a bill was not included in the inventory, the department manager crossed out the words "old stock;" otherwise he crossed out the words "new stock."

All departmental inventories which were abnormally out of line with the corresponding book inventories were recounted.

This plan required that all the employees of the store assist in taking the inventory, and that they work under pressure. Under this method, the responsibility for listing, counting, and checking the merchandise in the departments was placed on the buyers for those departments, although the general plans for taking the inventory were supervised by the controller. The book inventory was adjusted in accordance with the actual count, and, since all departments were inventoried at once, no discrepancies could develop between the time of taking the inventory and the time of closing the books. If the count of the merchandise was not checked carefully, however, errors were likely to result because of the great pressure under which the inventory was taken. Under this plan, the check on the merchandise count

was made by the salespersons rather than by a temporary special squad, as under the Tilden Company plan.

A possibility considered by the Tilden Company was that the inventory of the various departments might be taken on a piecemeal basis; each department as a whole would be inventoried at one time, but at the most convenient time both for the department and for the store. Under this method inventory might be taken either during business hours or at night at any time during the season. The inventory of a department could be taken when the stock was low, when few sales were being made, or when the merchandise could be arranged easily for that special purpose. Under this plan, the physical inventory for the entire store could be taken by a squad of six to ten inventory specialists, who would have no other duties.

The assistant merchandise manager in charge of inventorying estimated that it would take a special squad of six to ten employees about a month of actual working time to take the inventory of all the departments in the store under the piecemeal method. The operation of this plan, of course, would involve the use of book inventory figures in closing the books for the determination of profit and loss.

The Tilden Company, therefore, had a choice of the following possibilities: continuance of the existing procedure of taking inventory during selling hours over a two-week period; adoption of the plan of taking physical inventory in one night after the close of the business day; or abandonment of the general simultaneous stock taking in all departments in favor of a plan of using book inventory figures for the periodic determination of profit or loss, supplemented by physical inventories taken at different times in different departments.

COMMENTARY: The existing procedure of the Tilden Company of spreading the physical inventory over a two-week period was open to the following principal objections:

1. Difficulty of arriving at accurate inventory figures because of sales and purchases made during the inventory period;
2. Interference with effective selling in the departments during the inventory period;
3. Necessity for using a large special squad in addition to regular employees.

Some of the difficulties encountered by the Tilden Company were due to the fact that its fiscal year ended December 31. A more usual date for department stores to close their fiscal years is January 31; and it appears that the Tilden Company might profitably have made such a change in the date of closing its fiscal year, in spite of the difficulties which such a change would involve in the maintenance of comparable annual data.

The method used by a competing store, as described in the case, of taking inventory throughout all departments in a single night following the close of the business day is open to the following objections:

1. Because of the limited time there is danger of inaccuracy.
2. Employees frequently object to the overtime work, and consequently do not do the inventory work conscientiously.
3. In some states there are laws limiting the number of hours per week which women may work, and in order to avoid conflict with these laws it may be necessary to give some employees time off during the same week in which overtime work is called for.

The success of this plan depends largely on careful advance preparation, such as that described in the case. Difficulties arising from possible inaccuracy in the count of stock under this plan are minimized by the fact that practically all large department stores maintain book inventory figures with which physical inventory figures are compared. Then for departments in which wide discrepancies appear between the book and physical inventory figures, recounts can be made. In general, this plan of taking physical inventory in one night after the close of the business day appears to be preferable to the plan which the Tilden Company was using.

Since the Tilden Company apparently was operating on the retail method of inventory,² the management should have given careful consideration to the possibility of taking physical inventory on a piecemeal basis at various times in different departments. The Federal income tax authorities permit the use of such figures in the determination of taxable income.³ Since under the retail method of inventory valuation, depreciation is taken care of more or less automatically, provided proper mark-downs are taken, the Tilden Company, in using this plan of inventory, would not have been in danger of reporting fictitiously inflated profits through failure to take depreciation. In using book inventory figures for the purpose of closing its books, however, the Tilden Company would have had to consider the matter of stock shortages, since book inventories cannot be corrected for stock

² See McNair, M. P., *The Retail Method of Inventory*, A. W. Shaw Company, 1925.

³ See United States Treasury Department, *Regulations* 69, Article 1612.

shortages until physical inventories have been taken. Stock shortages for the Tilden Company apparently were somewhat lower than normal—less than 1% of net sales as compared with a common figure of 1.6%.⁴ Nevertheless, if the Tilden Company had contemplated using the piecemeal plan of physical inventory, it would have been necessary to make some provision with respect to shortages. Such provision might have been made in either of two ways:

1. Reserves might have been established on the basis of departmental shortage records of previous years, and such reserves deducted at the time of closing the books.

2. The schedule of physical inventories might have been arranged in such a way as to cover all the departments notoriously subject to stock shortages during the two weeks prior to the closing of the fiscal year.

The plan of taking physical inventories on a piecemeal basis, one department at a time, had certain obvious advantages. It permitted the use of a small special squad which could concentrate wholly on the task of taking physical inventories. It also permitted the physical inventories to be taken at the times most convenient to particular departments, such as the periods when both stocks and sales were at a low point. Therefore, provided the difficulties in connection with stock shortages could be overcome, it would have been desirable for the Tilden Company to adopt the third suggested plan of taking physical inventories.

April, 1927

M. P. M.

⁴ Bureau of Business Research, Harvard University, Bulletin No. 53, *Operating Expenses in Department Stores in 1924*, p. 24.

BARRINGTON MOTOR CAR COMPANY¹

WHOLESALE AND RETAIL DISTRIBUTOR—AUTOMOBILES

SALES FORCE CONTROL—*Sales Analysis Records to Control Salesmen's Activities.* Because of marked differences in the performance of its salesmen, an automobile distributor decided to make use of a compact sales analysis sheet. This sheet recorded, for each salesman, cumulative figures to date for the current year which enabled the sales manager readily to compare the work and achievements of the salesmen and to direct their activities effectively. The sheet also provided a record of the sales progress of the company as a whole.

SALES RECORDS—*Based on Deliveries Rather than on Orders.* An automobile distributor, when planning to keep a systematic record of salesmen's activities, decided to base the record upon deliveries instead of upon sales, because cancellations of orders were frequent.

(1922)

The Barrington Motor Car Company, located in a city of approximately 500,000 inhabitants, held the distributor's franchise for the Durvan motor car in that city and in 7 counties. In 1922, the sales manager concluded that the marked differences in the number of cars sold by the various salesmen made it advisable to devise a compact analysis sheet upon which could be recorded information which would make possible a comparison of the efforts and accomplishments of the salesmen from month to month and for the year to date. Data for such a composite record could be secured from salesmen's daily reports, sales records, and prospect cards.

Prices on models of the Durvan motor car ranged from \$3,000 to \$5,000. The Durvan Motor Car Company¹ sold its cars through approximately 100 distributors located in large cities throughout the United States. The company gave each distributor exclusive sales privileges in the territory contiguous to the city in which the distributor was located. Distributors sold at retail within their own cities and the immediate suburbs, but in most cases appointed dealers or maintained branches for dis-

¹ Fictitious name.

tribution in the outlying districts. The distributors sold to about 800 dealers. Distributors purchased cars directly from the factory at approximately 25% off the list price and acted as wholesalers for their dealers, who received discounts of about 20% from the list price.

The Barrington Motor Car Company had been a Durvan distributor for over 10 years. It controlled by contract nine dealers who solicited orders and operated service stations in the outlying districts of the territory. The company employed six salesmen for new cars and one for used cars. The executive officers of the company were a general manager and a sales manager.

The Durvan Motor Car Company established a yearly quota for each distributor, allowing additional discounts to distributors who fulfilled their quotas. The Barrington Motor Car Company in turn established quotas for its nine dealers and its six retail salesmen; the total of these quotas always exceeded the quota assigned to the company by the manufacturer. In establishing a salesman's quota, the sales manager bore in mind the salesman's ability, as indicated by his sales during the previous three years, and general business conditions. The company did not pay its salesmen bonuses based on fulfillment of sales quotas. It did, however, offer special discounts to dealers to encourage them to reach their quotas.

The sales manager was doubtful as to the advisability of using sales as the basis for the desired analysis sheet, because he had found that sales, or orders, were not always an authentic indication of the number of deliveries which would be made. Orders canceled before delivery were especially numerous immediately following a period of prosperity. Customers also sometimes changed their minds before deliveries were made and purchased other makes of cars. However, since a car which was sold in one month might not be delivered until one or two months later, records based on deliveries would not enable the company to compare the current performances of salesmen so well as would records based on orders. The sales manager, nevertheless, decided to use deliveries as the basis for the proposed analysis.

The sales manager wished to include on the analysis sheet information which would reveal to him the strong and the weak points of each salesman's current activity and indicate the month-

to-month sales progress of the company as a whole. Although the analysis was to be cumulative, with additions made each month, the sales manager believed that, in view of the time which elapsed between sales and deliveries, the analysis would be more valuable for yearly than for month-to-month comparisons.

Salesmen's daily reports included data as to calls made on prospective customers and on owners, appraisals of used cars made, demonstrations given, and persons interviewed in the salesroom. In the "prospect file" were listed "active prospects" and also the names of persons who had been active prospects but who had ceased to be interested in purchasing Durvan motor cars. The order book indicated sales and deliveries by models, sources of the original inquiries, terms of sales, the number and makes of used cars traded in, and the allowances made for them. The used car department could furnish records of the number and prices of used cars sold. The sales manager maintained an independent record of each salesman's deliveries as compared with his quota. The accounting department maintained cost records from which the cost per delivery could be obtained.

In Exhibit 1 is shown the sales department analysis sheet finally drawn up by the sales manager. This sheet gave for each salesman cumulative figures for the year to date. Separate sheets were kept for monthly figures. The terms "sales" and "sold" were used on the analysis sheet to refer to deliveries.

The sheet contained five sections: Sales Efforts, Quota Distribution, Sales Analysis, Source of Inquiry, and Used Car Analysis. The Sales Efforts section contained four columns: the first indicated the number of days the salesman had worked; the second, his total calls; the third, the average number of calls per day; and the last, the number of calls per car delivered.

The second section of the analysis sheet was concerned with the actual and estimated distribution of the yearly quotas. The first column recorded each salesman's yearly quota. In the eight succeeding columns the quotas and the actual deliveries were recorded for the first, second, third, and fourth quarters of the year; the last column of the section indicated the total deliveries made by each salesman. From these figures each salesman's percentage fulfillment of his quota was derived.

The third section of the sheet was an analysis of deliveries and indicated whether a salesman's deliveries were made to "old cus-

EXHIBIT I

CUMULATIVE SALES ANALYSIS SHEET OF BARRINGTON MOTOR CAR COMPANY, WITH TOTAL FIGURES
AND PERCENTAGES FOR 1924

BARRINGTON MOTOR CAR COMPANY

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Names of Salesmen	SALES EFFORTS				TOTAL DISTRIBUTION								SALES ANALYSIS				SOURCE OF INQUIRY				USED CAR ANALYSIS							
	Days Worked	Total Calls	Average Daily Calls	Calls per Delivery	First Quarter		Second Quarter		Third Quarter		Fourth Quarter		Deliveries 1924	Old Customers	New Business	Cash Sales	Time Payments	Old Customers	Salesroom	Sales Promotion	Local Auto-mobile Show	Outside Leads	Number Appraised	Number Traded	Straight Sales *	Durvans Traded	Other Makes Traded	
					Quota	Sold	Quota	Sold	Quota	Sold	Quota	Sold																
Totals	1,493	10,513	7	47	283	57	60	114	87	42	30	47	224	153	71	192	32	153	35	5	6	25	547	28.2 %	31.3 %	70	115	39
							105.3 %		76.3 %		71.4 %	67.1 %	79.2 %	68.3 %	31.7 %	85.7 %	14.3 %											

NOTE: "Sold" and "sales" refer to deliveries.
* Sales on which used cars were not taken in trade.

tomers" or to "new customers" and whether the sales were made for cash or on a deferred payment plan.

In the fourth section of the sales analysis sheet there was a tabulation of the sources of the inquiries which had led to the sales. The five sources listed were: Old Customers, Salesroom, Sales Promotion, Local Automobile Show, and Outside Leads. The Sales Promotion column referred to customers located through circularization, and the Outside Leads column to customers located by a salesman either through his own initiative or at the suggestion of the sales manager. The information recorded in this section afforded the company an indication of its most fruitful sources of customers.

The last section of the sales analysis sheet was concerned not with used car sales but with the used cars accepted from customers in part payment for new cars. The section was divided into five columns and provided for a record of the number of appraisals made for each salesman, the total number of cars traded in, the number of "straight sales," the number of Durvans traded in, and the number of cars of other makes which were traded in. Straight sales indicated sales on which no used cars were taken in trade.

Each column of the analysis sheet was totaled, and percentages were computed for the second, third, and fifth sections. In 1924, after he had used the sales department analysis sheet for more than a year, the sales manager stated that the information contained on the sheet, together with his personal knowledge of the sales force, afforded him an adequate check on the salesmen's activities and enabled him to direct their efforts satisfactorily.²

²During 1924 the Durvan Motor Car Company had designed for use by its distributors and dealers a monthly sales department analysis sheet, termed an Efficiency Board, on which figures were entered daily. The purpose of the board was twofold: to aid sales managers in the supervision and analysis of the salesmen's efforts, and to spur competition between salesmen. The Durvan Motor Car Company had introduced the analysis sheet in the belief that salesmen constantly needed assistance and guidance. The Efficiency Board consisted of the following sections, divided by salesmen's names in order of merit as indicated by the previous month's record.

1. Number of prospects at end of previous month
2. Number of prospects abandoned:
 - (a) Sold (the cumulative number of prospects sold during the month)
 - (b) Lost (the cumulative number of prospects who had bought another make of car during the month)
 - (c) Eliminated (prospects transferred to the Open File or dropped during the month)

COMMENTARY: The plan of the Barrington Motor Car Company for the control of salesmen's activities gave essential information without causing an undue amount of effort to be put forth either by the salesmen or by the sales organization. The column entitled "Sales Efforts" was significant in showing whether or not a salesman's failure was due to lack of industry. Since it has been observed in many lines of business that, other things being equal, the greater the number of calls, the greater the number of sales, it was possible for the sales manager in this case to determine whether or not the failure to make deliveries was due to the failure to make a sufficient number of calls. Lastly, the "Sales Efforts" column furnished a rough measure of the relative effectiveness of these calls in the figure of the number of calls per car delivered.

The second section of the sales analysis sheet, dealing with quotas and actual sales for each salesman, is obviously necessary, for purposes of control, in any reasonably well thought out plan. The third section, regarding deliveries to old and new customers and sales made for cash or on deferred payment, brings out information necessary to determine the direction of sales development and points out striking differences between salesmen in the proportion of sales made for cash, the proportion of sales made to new customers, and so forth.

The fourth section was of service to the sales manager in showing the sources of inquiries which led to sales; from this section, by examination of particular records, the sales manager could determine whether

-
3. Number of new prospects:
Daily and cumulative figures
 4. Total number of prospects on file
 5. Number of contacts with non-prospects:
Daily and cumulative records of contacts other than with prospects
 6. Number of outside interviews with prospects:
Daily and cumulative figures
 7. Number of interviews with prospects in salesroom:
Daily and cumulative figures
 8. Number of owner calls:
Daily and cumulative figures
 9. Number of demonstrations given:
Daily and cumulative figures
 10. Number of appraisals made:
Daily and cumulative figures
 11. Total used car prospects on file:
Cumulative figure
 12. Used cars traded in and sold:
The cumulative record of the number of used cars traded in and their total purchase price; also the number and the total selling price of the used cars sold
 13. Quota for the month
 14. New car deliveries:
The number and total selling price
 15. Unfilled orders:
The total of unfilled orders on hand irrespective of date of receipt of order

or not the failure of a salesman to produce his quota might be due to failure to follow one or another source of leads.

The last section of the summary furnished in greater detail an analysis of the used car transactions in relation to deliveries, of prime importance in following the course of used car "trade ins," which constitute a potentially fruitful source of loss if not carefully handled.

The use of deliveries rather than orders for measuring the performance of salesmen was partly justified because it was the more conservative basis and was less likely to lead to action which might result disastrously if orders should in any large degree fail to materialize in deliveries. Nevertheless, it was important from the viewpoint of the sales manager to determine the reason why an unduly large proportion of the orders of some salesmen failed to materialize in deliveries. The fact that one salesman's deliveries represented only 50% of orders might indicate faulty selling, of a different type from that of the salesman whose deliveries represented 90% of orders, even though the total number of deliveries in both cases was the same. It would seem, therefore, that the sales manager in some way or other should have maintained a record of orders as well as of deliveries to supplement the other records concerning the performance of salesmen.

The control system for salesmen here used complies with the general requirement of a good control system. It provided information which should and would be used in the direction of future sales. It was simple and required a minimum of effort on the part of salesmen and sales managers. It indicated essential developments, changes, faults, and merits of salesmen, or at least pointed out faulty performance of various types as a basis for further study and direction of the sales force. As with any other control system, the satisfaction to be expected from its use would depend upon the executives who used it even more than upon the system.

February, 1927

H. R. T.

HALLETT FOOD PRODUCTS COMPANY¹

MANUFACTURER—CANNED FOOD PRODUCTS

SALES FORCE CONTROL—*Rating System as Basis for Distribution of Bonus.*

A company manufacturing canned food products wished to adopt some method of judging the relative merits of its district sales managers, on the basis of which it was to pay them bonuses. The company decided that the district managers should be rated arbitrarily by the general sales manager according to leadership, individual accomplishment, cooperation with the home office and adherence to the company's sales policies, and sales performance of the district organization. Each of the factors was to be weighted equally at first, but the latter two eventually were to be given greater weight than the other factors.

(1923)

The Hallett Food Products Company, which manufactured and distributed canned food products, had divided the United States into 52 sales territories, which varied in size from a single city to 2 or 3 states. For purposes of sales control, these territories had been grouped into 17 districts, each with a district manager in charge. Some of the districts were made up of large territories with comparatively scattered populations. In such districts one manager might control only 3 or 4 salesmen, whereas in congested regions one district manager might control from 10 to 20 salesmen. The company employed about 150 salesmen in all, who visited retail grocers and solicited orders to be shipped through wholesalers whom the retailers designated. Twice each year, managers' meetings were held to discuss general sales policies.

In January, 1923, the company decided to adopt some method by which it could judge the relative merits of the 17 district managers. The general sales manager suggested a rating system. On the basis of their ratings under this system, the district managers were to be paid bonuses.

The duties of a district manager varied somewhat according to the number of salesmen under his control. In general, how-

¹ Fictitious name. See also Hallett Food Products Company, 1 H.B.R. 394; commentary, 2 H.B.R. 519.

ever, all the district managers had the same duties. Each district manager directed the activities of the territorial managers and salesmen in his district. Occasionally, the territorial managers trained new salesmen under the district manager's supervision. The general sales manager at the main office employed and discharged the salesmen, but he usually acted upon the district managers' recommendations. The district manager was responsible for missionary work in his district and frequently accompanied salesmen on their visits to prospective customers. He also visited retailers and wholesalers independently in an effort to promote sales and to adjust any difficulties that might exist.

The system which the general sales manager suggested provided that each district manager should be rated on these four factors: leadership; cooperation with the home office and adherence to sales policies of the company; sales performance of the district organization; and individual accomplishment. The general sales manager was to rate the district managers, since he communicated with them constantly and knew them personally. He wished to give each of the four factors a value of 100% and to let a district manager's final rating be the arithmetic average of his rating on the four factors. The sales manager said that in actual practice a district manager seldom would be given a rating of more than 92% on any factor. For example, a district manager might be rated as follows for the reasons enumerated:

Leadership.....	80%
This rating indicated that the district manager was a satisfactory leader.	
Cooperation with home office.....	65%
This showed that the company had had difficulty in inducing the manager to adhere strictly to the sales policies outlined, or to cooperate with the home office.	
Sales performance of the district organization.....	75%
This indicated that the sales of the district did not compare especially well with those of other districts. Possibly sales had not shown any improvement over the previous comparable period.	
Individual accomplishment.....	92%
This rating signified that the manager was an exceptionally successful salesman.	
Average rating.....	78%

The treasurer of the company approved the plan in general but was convinced that the four factors should not be rated equally. He contended that sales performance was the most important factor and cooperation with the home office the next in importance. The treasurer suggested tentative ratings as shown in Exhibit 1.

EXHIBIT I

DIFFERENTIAL WEIGHTS SUGGESTED FOR DISTRICT MANAGER RATINGS
IN HALLETT FOOD PRODUCTS COMPANY

	Highest	High	Medium	Low	Lowest
Sales performance of district organization.....	35 %	28 %	21 %	14 %	7 %
Cooperation with home office.....	25	20	15	10	5
Leadership.....	20	16	12	8	4
Individual accomplishment.....	20	16	12	8	4
Total.....	100 %				

At the time that the plan was advocated, the company's salesmen and district managers received salaries. In addition, they shared, in proportion to the amount of salary, in a bonus fund which was distributed quarterly. For every case of canned goods shipped, the Hallett Food Products Company placed a fraction of a cent in this fund, referred to as the "salesmen's dividend fund." The bonuses were called salesmen's "common stock dividends."

Under the proposed plan of rating, an additional bonus was to be distributed among the 17 district managers on the basis of their ratings. The additional dividend was expected to average about one-twelfth of a manager's total remuneration. It was to be termed "a preferred stock dividend."

The use of the rating plan would emphasize the fact that the success of the sales organization depended largely upon the district managers. Another advantage of the plan was that it would reveal to each district manager his weaknesses. A recipient of a low rating on one factor was likely to endeavor to improve in that particular. Each district manager was to be sent a copy of his rating sheet. This was to facilitate a frank discussion between each district manager and the general sales manager. The ratings were to be strictly confidential and were to act as a spur to general development of the district organizations. District managers had been promoted to their positions because of their outstanding ability as salesmen, and some of them had not built up strong district organizations. District managers were to be encouraged to put the dividends they received into savings accounts.

The Hallett Food Products Company realized that under the plan suggested ratings would be determined arbitrarily. It was possible that the plan would lead to charges of favoritism and to antagonism toward the general sales manager.

The company adopted the rating system as advocated by the general sales manager. Each factor was to be weighted equally, although sales performance of the district organization was admittedly the most important. Since under the arbitrary method of rating the determination of the percentage gradings within several points would be extremely difficult, the company believed that during the experimental period equal ratings for the four factors were likely to be more satisfactory than weighted ratings.

The Hallett Food Products Company deemed it probable, however, that sales performance of the district organization and cooperation with the home office would be given greater weight than the other factors after the system had been in operation for a time.

COMMENTARY: The problem to be discussed in the case of the Hallett Food Products Company involves the distribution of a bonus fund among district managers on a basis of ratings; the general advisability of a bonus plan is not considered here. Such a bonus as proposed by the Hallett Food Products Company will furnish the desired incentive only if it is distributed on a basis which is considered fair by the district managers. When the bonus is distributed proportionately to sales, it approaches a commission. In other cases it is distributed only with general relation to the rank of each district in sales accomplishment.

The attempt to take into account a number of different factors, in this case leadership, cooperation with home office, sales performance, and individual accomplishment, is to be commended in principle, though the particular plan adopted is subject to criticism. The making of satisfactory ratings is difficult. In this case, since the ratings of all managers would be made by the general sales manager, a difficulty frequently encountered, that of maintaining uniformity of standards, would not be important. The conscious attempt to appraise particular, important portions of the district manager's work should render the total appraisal more accurate than a lump appraisal without reference to constituent elements. But any rating plan which attempts to break down into characteristics a man's personality and work is open to the objection that frequently a composite total impression will be more accurate than the sum of a series of partial impressions, because of what psychologists call the "halo" effect.

The chief objection to the plan of the Hallett Food Products Company is that the ratings were to be determined rather arbitrarily by the general sales manager. They would be accepted by the district managers only under compulsion or because the district managers had complete confidence in the fairness and judgment of the general sales manager. The expectation that sales performance and cooperation with the home office would be given greater weight would not tend to relieve the strain upon the loyalty of district managers to the general sales manager and upon their confidence in him. Even though sales performance were measured by volume of sales, so that each district manager might thus be convinced of his standing, the degree of cooperation with the home office would, nevertheless, be subject to arbitrary determination by the sales manager. The rating of leadership likewise would be arbitrary, since there is no objective method of measuring that ability. As a whole, the plan might operate successfully, but it would do so not because of the inherent merit of the plan, but because in the use of even an ineffective plan the general sales manager possessed the confidence of his salesmen. Finally, the appraisal of newer sales methods or of newer applications of psychological methods to sales problems should be made not only with reference to an ideal result but also with reference to the results achieved by older methods.

February, 1927

H. R. T.

DICTOGRAPH PRODUCTS CORPORATION

MANUFACTURER—TELEPHONE SYSTEMS

SALES FORCE COMPENSATION—*Payment of Branch Managers.* In a company manufacturing electrical sound transmitting instruments, the division which marketed interior telephone systems had seven branch offices operated by branch managers. Each manager was paid a salary plus a commission of 10% on gross sales in his territory in excess of the quota for the territory. In 1926 the company altered its method of compensating the branch managers in order to put more emphasis on new business and on net profits of the branches. The 10% commission was replaced by a 15% commission on new business and a 5% commission on repeat business in excess of the sales quota, and each branch was required to show a minimum net profit before its manager would be entitled to full commissions.

SALES QUOTAS—*Method of Setting for Branch Managers.* A company manufacturing electrical sound transmitting instruments marketed its interior telephone systems through seven branch offices. The managers of these offices were paid salaries plus commissions on sales in excess of the sales quotas set for the territories. A branch manager's quota was set for any period as four times the branch office expense for the period. The expense figure used included all expenses incurred in the operation of the branch, except out-of-town traveling expenses that were later paid by the customer, and commissions paid to the managers.

(1926)

The Dictograph Products Corporation, with annual sales of about \$2,000,000, manufactured electrical sound transmitting instruments. Its chief products were the Acousticon, an instrument for the deaf, and the Dictograph system of interior telephones, used in business offices and apartment houses. The systems of interior telephones were marketed by a separate division headed by a vice president in charge of sales. In this division there were seven branch offices operated by branch managers. The method of compensating the managers was altered in 1926 to put more emphasis on new business and on net profits of the branch offices. The new method of payment was followed by a significant increase in the profits of the corporation.

The Dictograph system of telephones was designed primarily for interior communication between executives and department heads. It could be applied to other uses, such as loud-speaking page service in hotels; but it was used chiefly in banks, stores, and large offices where there was need for frequent interchange of information between two or more departments. The system consisted of two types of instruments, the so-called master station and the substation. These instruments were oblong in shape and measured a few inches in width and height and from 6 to 12 inches in length. They usually were placed on the executives' desks or on tables about three feet from the desks. The master station, for use by a chief executive, was connected with each of its substations. Each substation generally was connected with other substations, as well as with the master station. When an executive desired to speak with one or several of his subordinates he pressed the proper keys on the master station, which rang buzzers in the substations. Several men thus could be in communication at the same time. The master station worked on the loud-speaker principle, but the substations required ear pieces and mouth pieces.

Dictograph systems usually were higher in price than the systems of the company's 10 competitors; the price of the Dictograph 10-station set generally varied from \$900 to \$1,100 installed complete, the amount depending upon the installation expense for the particular system. The cost of installation commonly was quoted to the customer by the salesman or the branch manager prior to purchase. Underestimates, therefore, resulted in a reduction of the normal profit of the company. The systems were guaranteed for a period of two years against all mechanical and electrical defects. Maintenance service was provided from branch and service offices.

The company maintained branch sales offices in New York City, Boston, Chicago, Cleveland, Detroit, Kansas City, and Philadelphia. In each of these offices was a sales manager, who supervised the work of the salesmen and installation men. Seven service offices also were maintained; they were located in Albany, Atlanta, Buffalo, Hartford, Minnesota, St. Louis, and Washington. At each of these service offices the corporation employed only one man, a high-grade electrician, who did installing and servicing work primarily and selling incidentally. The salesforces at the

branch offices and service offices totaled 35 men; all of them were paid on a salary and commission basis. Dictograph systems also were sold by six agents located in cities where the volume of sales was not sufficient to support a company office.

The managers of the branch offices, until 1926, were paid salaries plus commissions of 10% on gross sales in their territories in excess of the quotas set for the territories. No distinction was made between new business and orders secured from old customers; nor were the commissions affected by variations in the net profits of the branch offices. In order to remedy the defects found in this plan of payment, a new plan was devised for purposes stated by the corporation as follows:

1. "To concentrate the efforts of our field organization on getting new business, by paying a higher commission for that class of business.
2. "To give our branch managers greater earnings, as compared with the old arrangement, for any increase over a normal volume of business.
3. "To reduce the bonus paid to any manager who falls below a normal volume of business—that is, to reduce the bonus as compared with what he would have earned under the old arrangement with that lesser volume of business.
4. "To cause our managers to take a personal interest in every factor entering into the management of their districts, including not only sales, but also the securing of the proper margin of profit on all business done.
5. "To hold down salaries to a level which would represent little more than the bare living expenses of our men and leave it up to them to earn the balance of their income on commissions.
6. "To credit and debit the branch office accounts in such a way as to encourage accuracy in estimating cost of installation and efficiency in handling the installation men.
7. "Through the operation of the above factors, to assure ourselves that a normal volume of business will yield a net branch office profit which will be sufficient for the profitable operation of our business, pay roll expense to

be automatically reduced when business falls below a normal level."

To accomplish these ends the corporation first changed its commission basis of payment. The 10% commission formerly paid managers on gross sales in excess of quotas was replaced by a 15% commission on new business and a 5% commission on repeat business obtained in excess of the sales quotas. A manager's quota, as before, was figured for any period by multiplying by four the branch office expense for the same period. New business consisted of sales of installed systems of telephones to new customers; repeat business consisted of service work and of sales of additional instruments and repair parts. The commission of a manager whose office expense was \$15,000 and whose sales volume was \$80,000, 70% of which was new business and 30% repeat business, would be determined as follows:

Sales for branch territory.....	\$80,000
Less quota, \$15,000 \times 4.....	60,000
Sales above quota.....	<u>\$20,000</u>
Proportion of new sales, 70% of \$20,000 or \$14,000 \times 15%..	
Commission.....	\$ 2,100
Proportion of repeat sales, 30% of \$20,000 or \$6,000 \times 5%..	
Commission.....	\$ 300
Total Commission.....	<u>\$ 2,400</u>

The expense figure used in determining managers' sales quotas included all expenses that were incurred in the operation of the branches with two exceptions: out-of-town travelling expenses that were later paid for by the customer, and commissions paid to managers. The expenses included the following items:

Salaries, Office	Bad Debts
Salaries, Salesmen	Travel
Sundries	Maintenance of Equipment
Express	Demonstration
Postage	Insurance
Trucking	Depreciation
Commission, Salesmen	Shipping Supplies
Stationery	Office Supplies
Literature	Taxes
Advertising	Automobile Expense
Rent	Service
Telephone & Telegraph	Legal
Light	

The distinction that was made between new and repeat business, with a larger commission for new business, gave the

managers an incentive to secure new customers. The discrimination was considered just, inasmuch as new business was relatively difficult to secure and repeat business followed with comparatively little effort. A proportionately larger reward, furthermore, was received by managers in comparatively undeveloped territories where most of the sales volume was composed of new installations. The readjusted rates also gave the managers an opportunity for larger earnings; for whenever new sales exceeded repeat business in a territory, the manager's commission rate was greater than 10%. Average commission percentages on varying proportions of new and repeat business are shown in Exhibit 1.

EXHIBIT 1

AVERAGE COMMISSION PAID TO BRANCH MANAGERS BY DICTOGRAPH PRODUCTS CORPORATION ON VARIOUS PROPORTIONS OF NEW BUSINESS AND OLD BUSINESS

Percentage of New Business (Commission 15%)	Percentage of Repeat Business (Commission 5%)	Average Commission Percentage
50	50	10
60	40	11
70	30	12
80	20	13
90	10	14

The branch managers were paid weekly salaries, but settlements of commissions were made semiannually. However, the managers were allowed moderate drawing accounts against future commissions. The company preferred that its managers adjust their week-to-week living arrangements to the total income represented by their salaries and drawing accounts, so that a reduction in drawing accounts would be felt. This, in the company's opinion, would serve as a stimulus for maintaining the level of their commissions. The managers' drawing accounts were closed under the following conditions:

"When the amount drawn by any branch manager, as a drawing account, during any two month period, shall have exceeded the commissions accruing to his credit during that period, he will be notified of this condition of his account, and if, at the end of an additional three month period, the commissions due him do not

exceed the amount paid to him, as a drawing account, then his drawing account will be discontinued until such time as the amount previously advanced to him as a drawing account shall be covered by an equal amount of accrued commissions."

The company considered it a mistake to be too hasty in cutting off an employee's drawing account. Under the plan adopted, managers had time to recover from temporary declines in business before their drawing accounts were discontinued.

Careful control of expenses by branch managers had been stimulated by the company's quota system even under the old method of payment. In revising its compensation plan for branch managers, however, the company decided to emphasize net profits more directly by stipulating that each branch had to show a minimum net profit before its manager would be entitled to full commissions. In the written agreements made between the company and the managers, the following explanation was given of this profit provision:

No commissions will be paid to any branch office manager in excess of the maximum figure stated in his written agreement, unless his net branch-office profit shall amount to 33% or more where union labor is employed or 36% or more where nonunion labor is employed, except that where the amount required to make up the difference between 33% or 36%, as the case may be, and the actual percentage of profit earned, shall amount to less than the total commissions; then a sufficient portion of the commission will be used to build up the branch-office net profit to 33% or 36%, as the case may be, and the balance will be paid to the manager.

Net branch-office profit instead of final corporation net profit was used as the controlling figure because the final profit was affected by general administration expenses over which the branch managers had no control. The net profit for a branch office was figured by subtracting from the sales of the branch the cost of goods sold and the direct expenses of operating the branch. Out of the net profit of the branches, general administration expenses were paid, and the remainder was the corporation profit. The required branch-office net profit ratio as given in the preceding provision, was arrived at by adding the usual percentage represented by general administration expenses to the percentage of final net profit desired by the corporation.

The maximum amount of commissions allowed a branch manager when the net profit for his office failed to reach the

standard was determined with reference to the particular office. Typically, the maximum of salary and commissions was \$7,500, in which event a manager would not receive compensation above \$7,500, regardless of the sales volume, unless the net profit for the branch equaled or exceeded 33% or 36%, as the case might be. The maximum amount was termed the "stop-loss" figure, because commissions above that figure were not granted unless the minimum branch-office net profit was made. This arrangement encouraged the managers to keep their attention on executive duties.

The new plan of compensation further emphasized economy in management by making installation costs affect the managers' commissions under certain conditions. Since managers included an estimated installation cost in prices quoted to customers, under-estimates resulted in losses and overestimates in gains to the corporation. The corporation also suffered or benefited financially according to the way in which a manager allowed his foreman to direct the installation men. To stimulate more careful estimates and control, therefore, the expense account of each branch office was charged with any loss incurred at that branch for installation labor and was credited with any saving. Monthly reports were made by each branch manager showing the saving or loss of labor on each contract job completed during the month, the net labor saving or loss being added to or deducted from the branch office expenses, for quota purposes. An increase in the expense account increased the manager's sales quota in the ratio of one to four, which in turn decreased the manager's commission possibilities. The opposite was true when expenses were decreased.

The vice president of the Dictograph Products Corporation stated that the new plan appealed to the managers' sense of fairness and sportsmanship. The managers were really asked to accept a business risk along with the company. If their records were average, they earned about as much as they would have earned under the old plan. If their performance fell below or rose above the average, the effect upon their earnings was proportionately greater.

The new compensation arrangement began to show its effect by the middle of 1926. During the last six months of that year, the installation expense ratio to total charges for making new

installations ranged from 38.3% to 46.1% as compared to the range for the whole year of 40.4% to 48.3%. Five of the seven branch offices reduced installation expenses below 43%, which was considered standard. The total gross billings for the year 1926 exceeded those for 1925 by 20%. The average branch-office net profit increased 45% in the same period.

The changes in sales, profits, and expenses are illustrated by the performance of one representative office, the record of which is given in Exhibit 2. This office was in an old territory; the same manager operated the office during the entire period; and there were no introductions of new products or improvements to affect the performance

EXHIBIT 2

THREE-YEAR RECORD OF SALES, EXPENSES, AND PROFITS FOR ONE
BRANCH OFFICE OF DICTOGRAPH PRODUCTS CORPORATION

	Total Sales	Ratio of Branch-office Net Profit to Sales	Ratio of Branch-office Expense to Sales
1925.....	\$54,000	25%	27%
1926.....	68,000	36	21
1927.....	60,000	39	19½

With regard to the performance at this office the sales manager stated that "the increase of sales in 1926 in this branch office was attended by a large increase in the percentage of profit, which is entirely attributed to the effects of the new compensation plan. As a result of causes beyond the control of the manager in charge of this district, there was a dropping off in sales volume in 1927 as compared with 1926. However, it is noteworthy that through the greater efficiency of management brought about by the new compensation plan, this manager was able to cut his percentage of expense still further and to increase his percentage of profit even on this smaller volume of sales."

COMMENTARY: The method of determining sales quotas for the branches, by utilizing a standard expense ratio, was particularly useful for control purposes. It was essentially the same in principle as the method proposed in the Glenrock Manufacturing Company's case.² The rate of commission paid to branch managers on sales in

² Glenrock Manufacturing Company, 6 H.B.R. 269.

excess of their quotas was higher than the ratio of managers' salaries to sales but less than the standard ratio of branch expenses to sales. This was an equitable arrangement, since all other branch expenses presumably were covered when the quota was reached, and the higher bonus rate enhanced the incentive to branch managers to increase sales without increasing other expenses.

The items which were included in the standard expense ratio used in determining branch quotas were expenses under the control of the branch managers. Hence the plan adopted gave direct encouragement to the branch managers to hold down their operating expenses and especially to guard against laxity in estimating installation costs. The interests of the company were further safeguarded, and properly so, by the limitation on the compensation to be paid to each branch manager unless the net profit of his branch exceeded a stipulated ratio. The differentiation in the bonus rate on "new business" and "old business" was warranted by the fact that the securing of new business called for the exercise of real salesmanship, whereas old business was largely in the nature of order taking.

The only question of importance to be raised regarding the plan was as to how well it would work during a period of severe business depression.

January, 1929

M. T. C.

DREER MACHINERY COMPANY¹

MANUFACTURER—MACHINERY

SALES OUTLETS—*Use of Distributor as Alternative to Branch Sales Office or Direct Selling.* A company manufacturing several kinds of machines wished to secure more adequate market coverage in the Middle West, particularly in the vicinity of Chicago, expecting by this means chiefly to increase its sales of power presses. A sales office already operated in a city in the Middle West could not cover adequately the entire middle western territory. The company believed the usual type of machinery merchant was not a suitable distributor for its products, since salesmen had to be trained in the construction and application of the machines. The company decided to grant exclusive representation in the Middle West for its presses to a company manufacturing an accessory used by the same type of plants using presses, and to sell its other lines directly by salesmen from its main office.

(1928)

Early in 1928 the Dreer Machinery Company decided to take steps to secure more adequate market coverage in the Middle West, particularly in the vicinity of Chicago. It was proposed that the company should seek to have its machines sold by machinery wholesalers located in the Chicago territory. An alternative to this was the establishment of a branch sales office, or at least the employment of the company's own salesmen, in Chicago. Later, when it was learned that the company was in search of representation in the Middle West, two firms specializing in the sale of a few machinery items asked to be allowed to handle the Dreer line.

The Dreer Machinery Company, an old and well-established firm making a good quality of products, was located in the East. Its annual sales amounted to several million dollars. The company classified its products in four groups: machinery for the manufacture of rivets, bolts, and nuts; copper wire drawing machinery, slitters, and eyelet machines; rolling mill machinery, including draw benches; and power presses. This division of the products in some respects was based on factory and personnel

¹ Fictitious name.

considerations rather than on marketing characteristics. For each of the four groups of machines there was an engineer who supervised both the designing and the selling of the machines in his department. The markets for the machines other than the presses were comparatively restricted and potential customers, most of whom were large firms, could be located readily. The market for the presses, on the other hand, was a much wider one and potential customers could not be located so readily. All shops or factories making or requiring pressed metal parts were potential customers for Dreer presses. Presses, for example, were used for making flat metal parts of small machines, cartridges, door keys, locks, hinges, other hardware, knives, forks, spoons, tin cans and tin boxes, metal parts of toys, tin book ends, bottle openers, tin tops for bottles, brass parts for electric light fixtures, and a wide variety of other things. It was chiefly sales of presses that the company expected to be able to increase by more adequate coverage of the middle western territory. The company recently had developed an improved type of press that it deemed superior to competing presses.

Dreer machines ranged in price from \$30 each to \$25,000 each. The average unit of sale for all the machines, however, was \$1,000 to \$2,000. Unit prices of the particular types of presses whose sales the company hoped to increase in particular were \$300 to \$1,000.

In the East the company had four salesmen with headquarters at the main office. These salesmen all had factory training. It was the company's experience that its customers liked to be visited by salesmen with mechanical background, who were able to explain to them the construction and use of the machines. The general manager of sales stated that even in selling the more simple of the company's presses the salesmen needed technical training. A salesman without adequate technical knowledge of presses might sell a user a press that was too large or too small for his needs, for example. For selling the company's other lines, technical information was even more important.

In addition to its eastern office, the company for over 20 years had operated a sales office in a city in the Middle West. At that office there were a manager and one salesman, and these two men had been expected to cover the entire middle western territory except for certain large firms, such as automobile manufacturers,

with whom the company dealt directly from its main office. It had been impossible for the two men at the middle western office to cover adequately the middle western markets for the four classes of Dreer machines. The result had been that the manager had concentrated efforts on one of the types of machines in which he was particularly interested and had made little effort to sell the others.

The company expected to advertise its line, particularly its presses, in connection with the proposed cultivation of the middle western territory. No definite advertising plans had been made, however.

In 1928, when the company decided to provide more adequate market coverage in the Middle West, its first step was to restrict the territory to be covered from the middle western office. Thereafter that office was to cover only the territory within a radius of 200 miles. It was thought that the manager and one salesman would be able to cover this territory thoroughly for all Dreer machines with the possible exception of the presses. Special circumstances which existed made it impracticable to place more salesmen at the branch office, so as to make that branch the headquarters for covering the Chicago territory.

After this decision was made the company had no representation in the Middle West, outside of the district of the branch office, except that provided by occasional visits of its eastern salesmen to large firms in the West. To secure representation in the Middle West, the company's first thought was to obtain the services of machinery merchants. Those merchants commonly handled machine tools and other machinery, either buying outright or selling on a commission basis. They had a wide acquaintance among machinery users and maintained permanent relations with customers by means of large salesforces. The Dreer Machinery Company anticipated no difficulty in securing representation for its products among such merchants. The company occasionally had sold machines to distributors, but it had quoted the same prices to those firms that it quoted to users.

Investigation soon convinced the company that the usual type of machinery merchant was not a suitable distributor for its products. Dreer products were not so highly standardized as machine tools and, in the company's opinion could not be sold satisfactorily by salesmen who were handling many other lines

in addition and who were not carefully trained in the construction and application of the machines.

It then was suggested that the company might make arrangements with machinery merchants whereby they would not actually sell Dreer machines but merely would secure inquiries to be followed up by the company. It was proposed that the company should pay the merchants a commission of 2% on all inquiries that resulted in orders. The company concluded, however, that the merchants would not be able to secure profitable inquiries without more special knowledge of the machines than they possessed, and this proposal consequently was rejected.

As a tentative measure, the company decided to undertake to reach the Chicago market by salesmen traveling from the main office. These salesmen would visit the larger potential customers about once a month; the company expected to learn through experience the most suitable interval for sales calls. The company was unwilling to ask any of its salesmen, all of whom were mature men with families, to move to the Chicago territory until it was certain that it intended to maintain salesmen there permanently.

About this time Mr. Cotton, president of a Chicago firm selling machinery, visited the Dreer Machinery Company and asked to be premitted to act as representative for the Dreer line in the Middle West. Mr. Cotton wished to be the company's exclusive representative there and asked for a flat commission of 10% on all sales in that territory. He stated that his firm specialized in assisting manufacturers to reduce production costs through the use of suitable machinery. He and his salesmen were prepared to study a prospective customer's manufacturing problems and to make recommendations as to machinery needs. Mr. Cotton's firm represented several manufacturers of machine tools and automatic and special cost reducing machinery; the manufacturers represented commonly made machines to meet the individual requirements of customers. Mr. Cotton employed six salesmen, who, he stated, were competent to advise machinery users with reference to their production problems.

In order to demonstrate to the Dreer Machinery Company his ability to sell its machinery, Mr. Cotton sent in several inquiries that he or his salesmen secured. Most of those inquiries were for complicated machines for special purposes and would

require a large amount of engineering work. The company was prepared to manufacture such special machines, but it constantly was endeavoring to increase its sales of standard machines. In 1928 the company was making about a thousand different machines, taking into consideration variations in sizes and styles. It was desirous of reducing this number. The general sales manager stated that when a new salesman was employed he tended to pick up complex inquiries and to agree to have the company work out the problems involved. This type of inquiry, the sales manager stated, was easy to secure. Most companies had complicated problems that they were willing to have anyone who seemed interested work on.

Not only was the Dreer Machinery Company dissatisfied with the type of inquiries referred to it by Mr. Cotton. It also objected to paying a straight commission of 10% on sales. On the more expensive machines, the company deemed a 10% commission excessive.

One inquiry which the company received from Mr. Cotton was accompanied by the following letter.

March 7, 1928

Gentlemen:

We are enclosing herewith an inquiry from the ——— Company on an Eyelet Machine with two sets of tools for producing the bushings as per blueprints #2871-6 and #2880-16.

During our recent visit to your plant we discussed the proposition of representing you in this territory, and although we realize you may not be ready to go ahead with this at once, we would like you to give us protection on an inquiry such as this. Without any sales expense to yourselves you might be able to allow us a 5% commission and we could add on 5%, in other words, figure on us making 10% and we will go ahead and see if we can't get the business.

We ought to get protection on any inquiries like this, and believe if you would work with us as outlined in the above paragraph, it will work to our mutual advantage. Anyway, we think it is worth trying.

Awaiting your proposition, we are
Very truly yours,

The company replied to this letter as follows.

March 12, 1928

Gentlemen:

We acknowledge the receipt of your letter of March 7 with enclosures, all relating to an eyelet machine for the ——— Com-

pany. We have already quoted them on the machine and tools, this quotation following a visit to their plant by one of our men during the middle of February. Under the circumstances we think it best not to turn this matter over to you to handle.

When your letter came in, before looking up to see if anything had been done by us previous to receiving your letter on this particular proposition, it was our thought, assuming that this inquiry had originated through you, that we would make a concession from our regular prices and suggest that you make a concession from your idea of a 10% commission and go ahead and see what could be done, but as we had already quoted we decided not to do this.

This, however, is perhaps a typical case to discuss and, therefore, we suggest that you let us know what your feeling would be toward our idea of handling the matter. To begin with we are not sympathetic toward any plan which makes our exclusive representative quote higher prices in this country than what we quote from the home office. You know that we have handled you and other dealers differently by making quotations to them and plainly letting it be known that we would quote the same price to the user; that we made no attempt to protect the dealer. This applied to those who were not our exclusive representatives.

If we had followed our original inclination regarding the eyelet machine for the ——— Company, we should have quoted you the regular price and would have allowed you a selling commission or discount of 5%, and would have protected you whether the order had come direct from the user or through you. This inquiry is typical of a number which might come up from our old customers, and we are curious to know what you think about our idea on the subject.

We find that we could probably establish and maintain a branch selling office similar to the one which we already have for about 5% of the sales which we made in Illinois, Indiana, Wisconsin, Iowa and Minnesota last year. We, therefore, are wondering just how we would be justified in giving you a 10% commission for this same work. We recognize that your force of six men would cover much more ground than our force of one man, but unless the volume of business could be materially increased, it is difficult to see how we could pay you materially more than it would cost us to do the work.

Another thought which has come up in connection with your possible representation is if there would not be some justice in limiting your commission on machinery sold to old customers while making a regular commission apply to others. Old customers should probably be limited to those who had bought from us during an agreed on period of years just back from the present.

We also have felt that a flat commission on our product is not altogether satisfactory. Our machines run from say \$30 to \$25,000.

The selling effort necessary to sell the \$25,000 machines is probably not very much more than to sell a \$2,500 machine. Taking off a large commission from a high price machine brings our net price down to such a point that there is practically no profit.

We suggest that you let us have your ideas on all of the above matters.

Yours very truly,

No answer was received to this letter and the company consequently concluded that its proposals were unsatisfactory to Mr. Cotton.

At about the same time the company was asked by another Chicago firm, the Scaron Company,² for the right to represent its machines in the western territory. The Scaron Company manufactured an accessory that was used by the same type of plants that used presses. It wished to have a more extensive line to sell in order to make a wider distribution of sales costs. The Scaron Company had been selling its accessory for some time and apparently had established good contacts with users of presses. It employed 15 salesmen, who traveled through the entire United States. The Scaron Company asked for exclusive representation for the full line of Dreer machines in the entire country.

The Dreer Machinery Company had no intention of discontinuing its plan of direct sale in the East, nor did it believe that the Scaron Company was competent to secure orders for the full line of Dreer machines. It did seem to the Dreer Machinery Company, however, that the Scaron Company might be able to sell its presses satisfactorily. The Scaron Company already had contacts with firms that were potential customers for Dreer presses, and the presses, particularly the lighter type for which there was the most extensive market, required less technical knowledge on the part of salesmen than was required by the other Dreer lines. Moreover, it would be relatively more expensive for the company to sell the press line directly than it would be to sell the other lines directly. Not only were the markets for the other lines more restricted, and the prospective customers on the whole larger and of more assured credit positions, but the unit of sale was greater for the other lines than it was for the presses. There was, moreover, less objection to paying a uniform rate of commission for sales of presses than for sales of the entire

² Fictitious name.

line, since the range of prices for presses was comparatively narrow.

In view of these considerations, the company tentatively decided to make the Scaron Company its exclusive representative for the press line in the Middle West but to sell its other lines directly to users by means of its own salesmen. In the East, presses, as well as the other lines, would be sold directly.

COMMENTARY: The decision of the Dreer Machinery Company to employ the services of the Scaron Company to sell presses in the middle western states seems to have been reached by impulse rather than by a judicial weighing of the facts and factors involved therein.

The need for technical training of the salesmen who were to sell presses was emphasized when the company's own sales organization was under discussion, but no evidence is presented in the case to indicate that the Scaron Company's salesmen surely would receive such training. Those salesmen were selling other lines, a fact which was likely to hamper them in becoming expert press salesmen.

It was stated in the company's letter to Mr. Cotton, the president of the machinery firm to which an agency was not granted, that the company could have operated a sales branch for about 5% of the company's sales in Illinois, Indiana, Wisconsin, Iowa, and Minnesota. There is no evidence that the Scaron Company was to be paid a commission less than 5%. It seems to have been the opinion of the company that the cost of selling presses, in percentage of sales, was higher than the cost of selling the company's other products; hence the 5% rate mentioned could not have been taken, perhaps, as applicable to presses. Nevertheless, the business had the earmarks of one suited for direct sale, and direct sales methods were employed successfully in the eastern markets. The potential increase in sales in the middle western territory through intensive cultivation, furthermore, offered possibilities of lowering the selling expense ratio.

In view of these considerations the reasons offered for employing the services of the distributor are not conclusive. If the company could have sold presses at an expense rate no higher than the commission allowed to the distributor, direct sale was to have been preferred in order that the company might have had full control of the salesmen, with singleness of purpose.

The reasoning in the case suggests a timorous attitude, with a shrinking from a decision that would have necessitated the bringing in of new salesmen, training of the salesmen, and perhaps a general overhauling of the company's whole sales organization.

November, 1928

M. T. C.

JENNER AND COMPANY¹

MANUFACTURER—INSECTICIDE

SALES PROMOTION—*Introduction of New Product to Household Market.* A company whose main products were sold in the industrial market began manufacturing a liquid insecticide, for which it wished to cultivate a household market. The manager of the company's specialty department believed that brand preference for this type of product was not strong among consumers and that retailers were in a position to influence consumers' purchases. He proposed, therefore, in an introductory offer, sent by circular letter to all unit drug stores in Massachusetts, outside of Boston, and in Maine, to grant a 5% discount and a certain quantity of free goods to every retailer accepting the offer. Salesmen were to visit the stores circularized to solicit orders, and in one county to which it expected to devote intensive sales effort, the company planned to advertise the product in local newspapers.

(1928)

In the summer of 1927 Jenner and Company decided to add a new specialty to its line. This specialty was a liquid insecticide similar to Flit and Flytox, which were widely advertised products. By January, 1928, the company, which was located in Massachusetts, had built up a reasonable sales volume in its local territory among users buying in large quantities and in bulk. Among such users were hospitals, restaurants, hotels, and various other institutions. The company's next step was to cultivate a market among household users.

The main products of Jenner and Company were sold in the industrial market. One of the executives of the company, however, was particularly interested in the development and sale of specialties. The manufacture of the insecticide presented no difficult problems to the company. The executive who was interested in its development was of the opinion that the public, as a result of the extensive advertising of Flit and Flytox, had come to prefer a liquid insecticide used as a spray to the older type of powder insecticides. He was of the opinion, furthermore, that the demand that had been created among consumers was

¹ Fictitious name.

for a type of merchandise rather than for a particular brand. Interviews with selected retailers had confirmed this opinion.

The company's insecticide was called Extermo. In the company's opinion, Extermo was fully as satisfactory as any other insecticide on the market. Two salesmen were employed, on a commission basis, to introduce this product to large users such as hospitals, restaurants, and hotels. The company was satisfied with the recognition which the product secured among this class of trade during the first six months that it was on the market. Repeat orders were frequent.

To the household trade the company planned to offer a combination outfit consisting of an eight-ounce bottle of Extermo; an eight-ounce bottle of Hygieno, a disinfectant made by the company; a sprayer; and a bottle holder, a white enameled wall bracket that was intended to hold the bottle of Hygieno. The retail selling price of this outfit was to be \$1. The outfit corresponded to those offered at the same price by other manufacturers of similar products but included the bottle of disinfectant and the bottle holder in addition to the items customarily offered in such outfits. The various items in the outfit also would be sold separately. For displaying its outfit the company had developed an attractive cardboard stand for distribution to retailers.

The company had been manufacturing Hygieno, the disinfectant, for several years. It had made no concerted effort to market that product, however, and sales were small. The company hoped to gain wider recognition for that product by including it in the combination offer with the Extermo. The disinfectant was for use in kitchen sinks, garbage pails, toilets, barns, kennels, etc., and also for use on bruises, cuts, and sores.

The manager of the company's specialty department proposed the following program for introducing Extermo to the household market.

Sales effort was to be directed to unit drug stores. The manager was convinced, as a result of his interviews with various retail druggists, that this was a product for which brand preference among consumers was not strong. If this was true, retailers, he believed, were in a position to influence consumers' purchases. The manager stated that the Standard Oil Company, which manufactured Flit, and other large manufacturers of insecticides depended on extensive advertising to consumers to stimulate

sales, rather than on the cooperation of retailers. This left the way open, in the opinion of the manager, for manufacturers who, like Jenner and Company, sought only local distribution to secure sales by making their products particularly attractive to retailers. It was on this theory that the manager planned to proceed. He did not intend to seek distribution in chain drug stores since it was his understanding that chain stores customarily sold only those items for which a demand had been created. He also did not intend to seek distribution, initially at least, in metropolitan Boston. Retailers in city areas, like chain store companies, were less likely, in the manager's opinion, to be moved by special inducements to give sales attention to particular items than were smaller retailers in towns and outlying areas.

The manager proposed during the latter part of January, 1928, to make an introductory offer, by circular letter, to all unit drug stores in Massachusetts, outside of Boston, and in Maine. There were approximately 1,500 such stores in the Massachusetts territory and about 400 in Maine. With the letter there would be included fliers describing the products and their uses. The circular letter which the manager proposed to send in explanation of the introductory offer was as follows:

INTRODUCING EXTERMO TO THE TRADE

Institutions, hotels and restaurants who are bulk users of Extermo have found it the most satisfactory of any product in its line and we believe it will be equally appreciated by the domestic user which we are now prepared to serve.

We aim to give the greatest satisfaction and best value to the consumer and to make our proposition so attractive to the dealer that we can expect his cooperation. We are including, in the \$1 sets, an 8 ounce bottle of our Hygieno which also offers exceptional value and is a sure repeater. Before further stocking insecticides will you not withhold orders until you learn more fully about our product through our representative who will call upon you as soon as possible. Better still, send us an order on our special introductory offer which you can do without taking any risk whatever.

INTRODUCTORY OFFER

2 doz. 8 ounce EXTERMO	at \$4	\$8.00	
1 doz. 16 ounce EXTERMO	at 6	6.00	FREE GOODS INCLUDED
2 doz. 8 ounce HYGIENO	at 2	4.00	1 doz. 8 ounce EXTERMO
2 doz. HOUSEHOLD SPRAYERS	at 3	6.00	2 doz. BOTTLE HOLDERS
		\$24.00	
	less 5%	1.20	
		\$22.80	

Terms: 30 days-2%-10 days Freight Allowed

We include an attractive display case showing the \$1 combination, also, a supply of descriptive circulars. At retail this shipment gives you two dozen \$1 combinations and one dozen each of 50¢ and 75¢ bottles of Extermo—total, \$39, thus realizing 41% profit on retail price.

Any portion of the above shipment returnable promptly at the expiration of 30 days freight charges both ways paid by us subject to condition that in case return privilege is exercised any goods sold or retained will be paid for at the wholesale list prices—5% discount and free goods applying to the full order only.

You will find that Extermo and Hygieno will both make good with your customers and bring them back for more. We look forward with confidence to the pleasure of receiving your cooperation for which we thank you in anticipation.

Very truly yours,
JENNER AND COMPANY
Manager

The costs to the company of the material included in the introductory offer were as follows:

	Cost
2 dozen 8-ounce bottles Extermo.....	\$ 2.20
1 " 16-ounce " "	1.85
2 " 8-ounce " Hygieno.....	1.80
2 " Sprayers.....	4.10
	<u>\$ 9.95</u>
<i>Free goods</i>	
1 dozen 8-ounce bottles Extermo.....	\$1.10
2 " bottle holders.....	1.60
	<u>2.70</u>
Display case.....	\$12.65
Circulars (for distribution by retailers to users).....	.75
Freight.....	.50
	<u>1.75</u>
	<u>\$14.40</u>

On reorders from retailers the company's selling terms would be the same as in the introductory offer with the following excep-

tions. No free goods would be allowed. The 5% discount would apply only on orders of six dozen or more eight-ounce bottles of Extermo or Hygieno or of the two assorted. Sales would be f. o. b. factory except on orders of six dozen or more bottles, in which case freight would be allowed. The clause relating to returned goods, moreover, applied only to introductory sales. It was expected that that clause, which relieved retailers of all risks, would remove any objection they might have to placing an initial order. Within a few weeks after the circular letter was sent out the company's salesmen would visit the stores circularized to solicit their orders.

The company expected to devote intensive effort to one county in Massachusetts. To retail druggists in that territory the company was prepared to make any concessions to get them to display its goods. The company, if necessary, would have its salesmen secure orders for the druggists by house-to-house canvass. There were slightly more than 200 unit drug stores in the county selected.

After the drug stores in this county had stocked its goods, the company planned to place small advertisements in the local newspapers during the spring and summer of 1928. The company did not wish to commit itself to this advertising program, however, and its salesmen were not to stress the likelihood that the company would do such advertising in their solicitation of orders. Whether the company advertised in any other area would depend upon the representation which it secured in the retail drug stores. The salesmen were to be paid commissions of 20% of the retail selling prices on all goods sold and not returned.

After it had introduced its products to the retailers, the company expected to ask drug wholesalers to list the products. Wholesalers would be given a discount of 20% from retail prices. Until a reasonable demand had been established among retailers, the company would not expect the wholesalers to carry stocks.

COMMENTARY: The details of the method of sales promotion adopted by this company for marketing Extermo are of less significance than the general doctrine of the plan. In the first place, the company was following an imitative rather than a constructive merchandising plan in putting this product on the market. There is no evidence to indicate that the product clearly was superior in quality to other liquid insecticides on the market, or that it could be manufactured more

cheaply; and apparently the company did not expect to tap a new stratum of demand. Its object rather was to obtain a share of the insecticide business which other manufacturers had been developing. This is a common business practice but not one that makes for healthier business conditions. Such a practice has the effect of increasing the wastes of competition without compensating gains to consumers. It necessitates greater expenditures by manufacturers on competitive sales activities, and for those retailers who carry such a new brand in addition to well-known brands the effect is likely to be a slowing up of the average rate at which their stocks are turned; in other words the retailers' gross investments in stocks of merchandise are likely to be increased.

The company expected to get a share of the demand generated by the advertisers of Flit and Flytox. The method by which this objective was to be attained was by encouraging retailers to practice substitution or at least to give preference to Extermo. The purpose of offering the free goods and the discount in the introductory order was to "make it worth the while" of the retailers to try to sell Extermo when Flit or Flytox was called for. The weaknesses of the reliance on substitution for building sales have been pointed out in the commentary on the Mohawk Soap Company² case. The company was not laying a firm foundation for its own business by relying on substitution by retailers to build its sales volume.

January, 1928

M. T. C.

² Mohawk Soap Company, 5 H.B.R. 467.

CHASE COMPANIES, INCORPORATED

MANUFACTURER—BRASS PIPE

SALES PROMOTION—*Selection of Methods.* Because it had unused production capacity and wanted to increase its sales volume, and because the plumbing field apparently constituted a large potential market for brass pipe, a large manufacturer of brass and copper products decided to undertake the aggressive promotion of brass pipe for plumbing purposes. The measures adopted to carry out this program were: production of an improved type of brass pipe; adoption of a trade name for the pipe; advertising in trade papers and later to consumers; use of a guaranty; and use of missionary salesmen.

ADVERTISING—*To Establish Brand Recognition.* In an attempt to promote aggressively the sale of its brass pipe for plumbing purposes, a large manufacturer of brass and copper products began to advertise this product under a trade name. Advertising at first was confined to trade papers, but after six years the company decided that it had received sufficient evidence of a market for the product and the name was sufficiently well known to warrant advertising to consumers.

(1922-1928)

In 1922 it was proposed that the Chase Companies, Incorporated, large manufacturers of brass and copper sheets, tubes, rods, and pipe, should aggressively promote the sale of brass pipe for plumbing purposes. The program included the production of an improved type of brass pipe; the adoption of a trade name; use of a guaranty; advertising; and the use of missionary salesmen.

Prior to 1922 the company had utilized no aggressive marketing methods and had done no advertising. This also was generally true of the company's competitors. Sales customarily were made on the basis of price, quality, and service. The company sold most of its output, by means of its own salesmen, directly to manufacturers using brass and copper in their products. The salesmen were technically trained and were competent to advise users as to their requirements of brass and copper. The company also, through its system of branch stocks, was able to make unusually quick deliveries to customers.

Brass pipe, which was used chiefly for plumbing, in 1924 was looked upon as a basic material and the pipe of one reputable manufacturer was deemed as satisfactory as that of another. Neither building owners, plumbers, architects, or contractors were interested in the make of brass pipe used. Moreover, brass pipe was used only to a limited extent; iron or steel pipe was much more commonly used. The executives of the company, however, were satisfied that for plumbing purposes brass pipe, although more expensive than iron or steel pipe, clearly was superior, chiefly because of its imperviousness to rust. It was estimated that the original cost of brass pipe installations was, on an average, less than 1% more, in percentage of total building costs, than the cost for corresponding installations of iron or steel pipes. However, the longer life of brass pipe and its freedom from need of repairs were thought far more than to offset the larger original cost. Because it had unused production capacity and wanted to increase its sales volume, and since the plumbing field apparently constituted a large potential market for brass pipe, the company decided to undertake to promote aggressively the sale of brass pipe for plumbing purposes.

An improved brass pipe, more particularly suited for plumbing purposes than the brass pipe then being sold, was made. This pipe was designed to withstand the action of corrosive waters harmful to iron and steel pipe and also to ordinary brass pipe. The improved pipe that the company made had other advantages over ordinary brass pipe, such as threading and cutting more easily and forming a rounder and more satisfactory bend without danger of flattening.

Inasmuch as the company planned to advertise the pipe, it was necessary to brand it in such a way that purchasers could identify it. The company decided to stamp at 12-inch intervals upon the pipe whatever trade name it was decided to use for the pipe.

It was suggested that the company might sell the pipe simply as Chase brass pipe. This suggestion was rejected, however, because the company also sold other grades of brass pipe and because the company was particularly desirous of stressing the fact that the new pipe was different from other brass pipes on the market. The company finally decided to call the pipe Alpha Brass Pipe; and this name it had registered. The name was

derived from the fact that the pipe for which it was to be used was composed entirely of so-called Alpha crystals rather than of Beta crystals. This was explained as follows in a pamphlet prepared by the company.

There are two kinds of crystals—Alpha and Beta.

Alpha crystals are dense, ductile and tough.

Beta crystals are strong but brittle, and worst of all will corrode much the quicker.

It is obvious, therefore, if a brass that will resist corrosion is wanted, one would be chosen that has none of the weakening Beta in it, but is composed entirely of Alpha crystals.

Now, brasses that contain only Alpha crystals are made of mixtures of copper and zinc having from 63% copper up. Below 63% copper the crystal structure of the brass begins to change and Beta crystals begin to form. In brass alloys containing between 63% and 55% copper we find an intermediate stage where the brass is made up of both Alpha and Beta crystals.

Decreasing the amount of copper in brass, down around 56% copper, there will be only Beta crystals and no Alpha at all.

Ordinary brass pipe is made from the "Muntz" alloy which runs between 60% and 63% copper and falls in this second class, the Alpha-Beta crystal structure.

It has been determined and proved, both in the laboratory and by the examination of corroded brasses, that the Beta grains will be first attacked by corrosion and the Beta brass will be entirely eaten away before the Alpha crystal brass is even affected.

It is obvious from the above that, as we wanted to make a better brass pipe, we decided to make a brass pipe composed entirely of Alpha brass. We, therefore, chose a copper and zinc mixture which contained 66½% copper, which was safely over the border-line of the Alpha-Beta region into the all-Alpha region.

The company further decided to call the pipe merely Alpha Brass Pipe rather than Chase Alpha Brass Pipe, although the Chase name would be used freely in the advertising. Calling the pipe simply Alpha Brass Pipe, in the company's opinion, minimized the possibilities of confusion and of substitution. If house owners, plumbers, contractors, and architects knew the pipe merely as Alpha pipe, they, if they wished that pipe, would specify Alpha pipe and wholesalers would have to supply it. If, on the other hand, the pipe was called Chase Alpha Brass Pipe, they might ask simply for Chase pipe or might assume that there were other kinds of Alpha pipe than that sold by the Chase Companies, Incorporated.

The company sold its brass pipe to wholesalers who resold to plumbers. It did not grant exclusive sales territories to its wholesalers but sought as dense distribution as possible. It was the company's observation that plumbers as a rule bought regularly from the same wholesale sources, in part to secure favorable credit terms. The Chase salesmen who sold to plumbing wholesalers also visited purchasers of other types of Chase products.

In each purchase of pipe for a plumbing installation there were, typically, four individuals who might influence the selection: the house owner, the plumber, the building contractor, and the architect. Those, consequently, were the individuals whom the company was interested in reaching through its advertising. It was better, in the company's opinion, to work through those individuals back to the wholesalers than to concentrate sales efforts on the wholesalers. The company decided to direct its advertising in the first instance to plumbers, architects, contractors, and wholesalers and not to advertise to house owners. Advertising to consumers, it was thought, might later be undertaken if the original advertising proved effective. The company used trade paper advertising chiefly; it also used direct mail advertising to some extent.

As a further sales argument, it was proposed that the company should guarantee its Alpha Brass Pipe. A guaranty of quality and composition, however, was deemed insufficient. The company decided to agree to replace any imperfect pipe returned by its customers with new pipe and to pay all the shipping costs involved in the transaction. It also decided to agree to remove, at its own cost, any pipe proved imperfect after installation and to install new pipe, also entirely at its own cost. The guaranty adopted read as follows:

ALPHA BRASS PIPE

Guarantee

Alpha brass pipe has the Alpha trade-mark stamped approximately every 12 inches along every length.

Alpha brass pipe contains not less than 65% copper, 0.4% lead, and the balance zinc.

Alpha brass pipe, $\frac{1}{8}$ " to 4" inclusive, is subjected to 2,500 pounds water pressure per sq. in. and all sizes above 4" to 1,000 pounds water pressure per sq. in.

Alpha brass pipe will withstand being bent cold through 180° (around a pin $1\frac{1}{2}$ times the inside diameter of the tube) without cracking.

Alpha brass pipe, properly used, will cut and thread easily and make good sharp threads.

Alpha brass pipe is straight, sound, and uniform. It will not vary more than 5% over or under the standard weights.

Alpha brass pipe is given a special tempering treatment that removes all possible stress or strains in the metal which might cause splitting or cracking.

If Alpha brass pipe, when properly used and installed, is unsatisfactory in any of the above ways, we will, after any necessary investigation, immediately and willingly make the following reparation:

(1) Any such imperfect pipe will be replaced with pipe meeting these specifications without any charge to the customer for the new pipe or shipping costs.

(2) If such imperfect pipe is discovered after it has been installed, we will pay the labor cost of removing the unsatisfactory pipe, we will furnish pipe that will meet these specifications free of all charges, and will also pay for reasonable labor costs of installing the new pipe.

The company further decided to experiment with the use of missionary salesmen. It employed three men to visit architects to introduce Alpha Brass Pipe to them and to encourage them to specify use of that pipe in the houses which were being built to their plans. The company could secure current data as to new buildings, and the names of the architects employed, from building statistics. In 1928, after four years, this missionary work with architects still was being carried on, and the company was satisfied that it was a profitable form of sales promotion. Prior to 1928, the company did no missionary work among plumbers. At that time, however, the company employed a missionary salesman to visit plumbers. He was expected to describe the merits of Alpha Brass Pipe to the plumbers and to advise them of the company's guaranty. He would take no orders. The company did not expect to employ men to call regularly upon plumbers. The object of the visits was to familiarize the plumbers with the pipe, and the company anticipated that one or two visits would be adequate for this. The company did not employ missionary salesmen to visit building contractors. In the first place, there was a very large number of them, and, in the second place, contractors, it was stated, rarely specified

plumbing materials, but rather left decisions on that point to the plumbers to whom they gave contracts.

In 1928 the company also began to advertise Alpha Brass Pipe to house owners by means of the *Saturday Evening Post*. The company was of the opinion that its pipe was sufficiently well known to architects and plumbers, and that sufficient evidence had been received of a market for the pipe, to warrant advertising to consumers. In the four years since it had begun to market Alpha pipe aggressively its sales of brass pipe had increased 400%, most of this increase being in sales of Alpha pipe itself.

Advertising expense was about 5% of sales of Alpha Brass Pipe. The company was of the opinion that the full cost of the advertising could not properly be charged against Alpha Brass Pipe, however, inasmuch as the advertising of that pipe was expected to aid in the sale of various other items which the company had begun to sell and which it later expected to advertise.

When the company decided to market an improved pipe under a distinctive trade name, it had anticipated that it would be able to obtain a better price for it than was obtained by manufacturers of inferior brass pipe. When it first placed its Alpha Brass Pipe on the market, however, the company had not sought a higher price, and the result had been that manufacturers of inferior pipe lowered their prices to wholesalers. When this was done, some of the wholesalers selling Alpha Brass Pipe sought lower prices on that pipe. The company would not lower its prices and, on the contrary, anticipated that eventually it would be able to secure slightly higher prices, more nearly commensurate with the improved quality of its pipe. At any rate, its marketing program for the pipe served to steady its prices and to lighten price competition on the line.

In 1928 the company had a further problem, allied with its earlier problem of selecting a trade name for its Alpha pipe. For some time the company had been making small quantities of pipe from what commonly was known as red brass. Red brass pipe was suitable for use in areas where the water was so bad as to affect even Alpha pipe. The company had made no concerted effort to market its red brass pipe, but it expected to do so and was called upon to decide whether it should sell that pipe under a special name or merely as Chase red brass pipe. It was suggested

that it might be called Red Alpha or Red Devil brass pipe. The designation Alpha was as applicable to red brass pipe as to that of which the company's Alpha pipe was made, since both were composed entirely of Alpha crystals. Chase red brass pipe, however, unlike Alpha brass pipe, had no features which distinguished it from high-grade red brass piping made by other manufacturers. For this reason, the company decided not to apply a special name to it, but to sell it simply as Chase red brass pipe.

COMMENTARY: The Chase Companies, Incorporated, enjoyed no brand discrimination in favor of their product in the pipe market in 1922, but within six years thereafter that marketing advantage had been obtained. The methods by which that end was achieved are worth examining.

The difficulties which stood in the way of achieving brand discrimination were: first, the fact that brass pipe had been sold extensively theretofore without brand discrimination; second, the higher price of brass pipe; third, the long life of the product; and, fourth, the character of the market.

The fact that brass pipe had been sold extensively without branding meant that, in order to secure brand preference, the company had to change an established market practice. The higher price of brass pipe, in the second place, made it necessary to establish a preference for brass pipe over iron pipe before preference for a particular make of brass pipe could be stimulated. The long life of the product, in the third place, was an obstacle to securing brand preference, because it meant that there were no repeat purchases by many consumers, hence little opportunity for creating a habit among them of buying by brand. Since the product was not of a display type, it was far more difficult to induce brand preference among new purchasers than was the case with other articles of long life that were kept on display by their owners. The character of the market, finally, presented difficulties because the decision to purchase was a composite decision, in which the building owner was influenced by the architect, the plumber, and the contractor, any one of whom might tend to thwart a carefully nurtured program for brand discrimination.

In order to provide means whereby the handicap arising out of the traditional practice of marketing unbranded brass pipe could be overcome, the company developed a new type of brass pipe which had increased durability and which could be installed with especial facility, because of its superiority to other brass pipe in threading, cutting, and bending. The development of this new type of brass pipe afforded a rational basis for brand preference. It also gave opportunity for

demonstrating the reasons for the higher price and the manner in which higher original cost was to be offset by lower upkeep cost. The first and most vital step, therefore, toward establishing brand preference was product differentiation by means of features of genuine superiority.

A trade-mark could be affixed readily to the product and the company chose a distinctive, phrasable trade-mark, thus providing for means of identification.

With a basis for brand discrimination established and with means of identifying the product provided, the next step was to determine the methods for exerting influence on the company's composite market. As has been pointed out, consumers made few repeat purchases and the product was not of a display type. Hence the initial attack upon the market was to influence the architects, whose advice largely governed the decisions of consumers on such a technical matter, and to acquaint plumbers with the merits of the product, particularly the facility of its installation, in order to lessen resistance in distribution. That task was performed by means of advertising and missionary sales work. Advertising also was relied upon to prevent friction arising with wholesalers and contractors. Since the appeal was to rational motives, "reason why" copy, with statements of specific facts and reasons for the use of Alpha Brass Pipe, was employed. The guarantee served to inspire confidence by demonstrating the extent to which the company was prepared to stand behind its product. Thus the plan was logical and well-coordinated.

The results of the execution of this program were to enable the company to utilize surplus manufacturing capacity, and to stabilize its market.

November, 1928

M. T. C.

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